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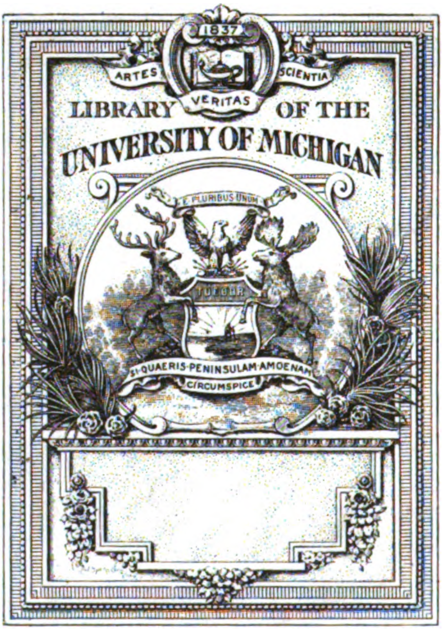
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COMPLIMENTS OF
CHARLES R. PARIS,
Member of Assembly,
—1899,—

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STATE OF NEW YORK.

DEPARTMENT OF AGRICULTURE.

The Report of the Commissioner of Agriculture, for 1897, consists of three volumes, as follows:

Volume I. Fifth Annual Report of the regular work of the Department of Agriculture, as required by section 5 of chapter 338 of the Laws of 1893.

Volume II. Ninth Annual Report of the State Weather Bureau, and Tenth Annual Report of the Cornell University Agricultural Experiment Station, made to the Commissioner of Agriculture in compliance with the provisions of section 87 of chapter 338 of the Laws of 1893.

Volume III. Sixteenth Annual Report of the New York Agricultural Experiment Station, made to the Commissioner of Agriculture in accordance with the provisions of section 85 of chapter 338 of the Laws of 1893.

TRANSMITTED TO THE LEGISLATURE JANUARY 14, 1898.

WYNKOOP HALLENBECK CRAWFORD CO.,
STATE PRINTERS,
NEW YORK AND ALBANY.
1898.

dup -

STATE OF NEW YORK.

DEPARTMENT OF AGRICULTURE.

FIFTH ANNUAL REPORT

OF THE

COMMISSIONER OF AGRICULTURE

FOR THE YEAR 1897.

TRANSMITTED TO THE LEGISLATURE JANUARY 14, 1898.

WYNKOOP HALLENBECK CRAWFORD CO.,
STATE PRINTERS,
NEW YORK AND ALBANY.
1898.

STATE OF NEW YORK.

No. 22.

IN ASSEMBLY,

JANUARY 14, 1898.

FIFTH ANNUAL REPORT

OF THE

Commissioner of Agriculture.

To the Honorable the Legislature of the State of New York:

In accordance with the provisions of the statutes relating thereto, I have the honor to herewith transmit the Fifth Annual Report of the work of the Department of Agriculture of the State of New York for the year ending September 30, 1897.

CHARLES A. WIETING,
Commissioner of Agriculture.

124602

DEPARTMENT OF AGRICULTURE.

Commissioner.

CHARLES A. WIETING, Cobleskill, N. Y.

Assistant Commissioners.

First Division........................GEORGE L. FLANDERS,
Albany, N. Y.

Second Division.................FREDERICK J. H. KRACKE,
No. 317 Washington Market, New York, N. Y.

Third Division............................HENRY S. AMBLER,
Chatham, N. Y.

Fourth Division...........................T. JAMES OWENS,
Steuben, N. Y.

Fifth Division....................S. BROWN RICHARDSON,
Lowville, N. Y.

Sixth Division........................*CHARLES R. PAYNE,
Hamilton, N. Y.

Seventh Division......................VERLETT C. BEEBE,
Arcade, N. Y.

Eighth Division......................WILLIAM T. HUGHES,
Room 221, Powers' Block, Rochester, N. Y.

Ninth Division.........................ASA L. TWITCHELL,
Springville, N. Y.

Tenth Division............................JAMES P. CLARK,
Falconer, N. Y.

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* Deceased, Charles T. Russell, Acting Assistant Commissioner.

REPORT.

In submitting this, the Fifth Annual Report of the Department of Agriculture, before proceeding directly to the statement of the work performed, I will call your attention to the fact that I have not made any change in the working divisions of the State. They are, as reported by me last year, as follows:

First Division.—Comprising the following counties: Albany, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie and Washington.

Second Division.—Comprising the following counties: Kings, New York, Queens, Richmond, Suffolk and one-half of Westchester.

Third Division.—Comprising the following counties: Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster and one-half of Westchester.

Fourth Division.—Comprising the following counties: Essex, Fulton, Hamilton, Herkimer, Montgomery, Oswego, Oneida and Warren.

Fifth Division.—Comprising the following counties: Clinton, Franklin, Jefferson, Lewis and St. Lawrence.

Sixth Division.—Comprising the following counties: Broome, Chenango, Cortland, Madison, Onondaga, Tioga and Tompkins.

Seventh Division.—Comprising the following counties: Chemung, Genesee, Livingston, Schuyler, Steuben and Wyoming.

Eighth Division.—Comprising the following counties: Cayuga, Monroe, Ontario, Seneca, Wayne and Yates.

Ninth Division.—Comprising the following counties: Erie, Niagara and Orleans.

Tenth Division.—Comprising the following counties: Allegany, Cattaraugus and Chautauqua.

The assistant commissioners in charge of the divisions during the fiscal year just ended were as follows:

First Division.—George L. Flanders.
Second Division.—Frederick J. H. Kracke.
Third Division.—Henry S. Ambler.
Fourth Division.—T. James Owens.
Fifth Division.—S. Brown Richardson.
Sixth Division.—Charles R. Payne.
Seventh Division.—Verlett C. Beebe.
Eighth Division.—Wm. T. Hughes.
Ninth Division.—Asa L. Twitchell.
Tenth Division.—J. P. Clark.

I have made but few changes in the employes of the Department. All new appointments that have been made since I have been Commissioner have been made in accordance with the Civil Service rules and regulations.

The general work of the Department consists in enforcing those provisions of law relating to

First. The enforcement of the milk law.

Second. The enforcement of the oleomargarine or imitation butter laws.

Third. The enforcement of the cheese and cheese brand law.

Fourth. The enforcement of the law relative to the care and feed of cows from which milk is drawn for sale.

Fifth. The enforcement of the vinegar law.

Sixth. The enforcement of the law relative to the diseases of domestic animals.

Seventh. The enforcement of the law relative to the prevention of diseases among bees and fruit trees.

Eighth. The distribution of money among the agricultural societies of the State.

Ninth. Conducting the work of Farmers' Institutes.

Tenth. Exercising such supervision and care relative to Geneva and Ithaca Agricultural Experiment Stations as is required by the Agricultural Law.

MILK.

The enforcements of the milk laws as provided by sections 20, 21, 22, 23, 24 and 25 of chapter 338 of the Laws of 1893.

Section 20 defines pure milk, and then fixes a standard below which milk cannot be sold upon the market as pure milk. An erroneous notion is apparently entertained by quite a number of people, to the effect that any milk that comes up to or above the standard is legally pure. They overlook entirely the fact that sub-heads 4, 5, 6, 7 and 8 of section 20, above referred to, are also a part of the law. The section referred to provides, among other things, as follows:

"The term adulterated milk, when so used, means:

1. Milk containing more than eighty-eight per centum of water or fluids.

2. Milk containing less than twelve per centum of milk solids.

3. Milk containing less than three per centum of fats.

4. Milk drawn from cows within fifteen days before and five days after parturition.

5. Milk drawn from animals fed on distillery waste or any substance in a state of fermentation or putrefaction or on any unhealthy food.

6. Milk drawn from cows kept in a crowded or unhealthy condition.

7. Milk from which any part of the cream has been removed.

8. Milk which has been diluted with water or any other fluid, or to which has been added or into which has been introduced any foreign substance whatever.

All adulterated milk shall be deemed unclean, unhealthy, impure and unwholesome. The terms, pure milk or unadulterated milk, when used singly or together mean sweet milk not adulterated, and the terms pure cream or unadulterated cream, when used singly or together mean cream taken from pure and unadulterated milk."

I am of the opinion that much agitation has been started and kept alive by those who are interested in bringing about a condition of things wherein milk shall be sold upon the market upon a guarantee system, that is, where the vendor shall guarantee a given amount of fat to be in the milk. I do not see any objection to selling milk that way where it is practical. For instance, I believe it is better by far to sell milk at creameries and factories where they have facilities for determining the amount of fat upon the fat basis, but it is not necessary in order to do this to do away with the standard. The standard is a bulwark of protection to the unsuspecting buyer and consumer in the large city, who has no means of determining the amount of fat, and possibly no idea of what milk contains. To purchase or sell a high grade milk under this system it is not necessary that any particular legislation should be enacted as it is already in vogue in many of the best creameries and butter and cheese factories in the State. The trouble with the advocates of this particular method is that while they know it works well in such places as I have mentioned they have had no practical experience with milk vendors in large cities, and they do not stop to consider the difference between an alert, practical creameryman, who has all the appliances with which to determine the richness of milk and the poor city buyer who has none. I cannot see or understand why this Department should modify its action or the Legislature should modify the law at the request or on the demand of people who have no evidence to offer that the law is wrong; mere assertion is not evidence.

In my last annual report I treated the subject to some extent but unfortunately for those who might desire to read it, it is not yet received from the printer. In that report I printed the views of the officials of several different States, who are charged with the enforcement of the dairy laws of their respective States, relative to the desirability of a milk standard. The milk laws of these States being similar to that of New York. The only one that in any way seemed to favor the fat basis method was Pennsylvania. Since that time Pennsylvania has passed a law creating a standard and her chief milk inspector in his annual report makes the following statement:

Legal Standards.

"It is an incorrect use of words to speak of a legally pure milk, for it is not the object of a legal standard to fix a standard of purity, but rather to prevent flagrant adulteration. While a few abnormal milks are found close to the minimum standards, yet the vast majority of pure milks are far above the legal standards in percentage constituents, owing largely to their richness in fat or cream. Nevertheless, a trifling amount of adulteration by added water would lower the percentage of solid, other than fat, not only below any legal standard, but also below that found in the milk from a herd of cows of any breed, however inferior, or in any condition however unsatisfactory. Experience proves that a legal standard for milk does protect the consumer by preventing the sale of adulterated and impure milk. A number of analyses of milk have been submitted to the public in the daily papers from time to time, which cannot be considered authoritative because the integrity of the samples has not been certified to, the method of analysis not stated, and the name of the analyst not given. Upon these data a great deal of fallacious reasoning has been indulged in concerning the very poor showing of milk from individual cows in an abnormal condition to the effect that the limit should be made so low as not to exclude such milk from the market—it being pure milk (that is, as it comes from the cow). It should be borne in mind that the milk supplied to the consumer is the product of the herd, and not that of the individual cow.

"A milk standard cannot be considered too high if the dairyman can readily and uniformly furnish milk of the required quality. In Massachusetts the standard is 13 per cent. and 3.70 per cent.; in Minnesota, 13 per cent. and 3.50 per cent.; in New Hampshire, 13 per cent.; in Iowa, 13.13 per cent. and 3.50 per cent. of total solids and fat respectively, and the dairymen in these States have no trouble in meeting the requirements of the law. Furthermore, as the quality has improved the quantity consumed has increased. It is a significant fact that these standards could not have been made by the Legislatures without the consent and approval of the dairymen themselves.

"On October 30th ult., Mr. William T. Painter, Lenape, Chester Co., Pa., brought for analysis a fair sample of milk from his dairy. He thought the milk would not come up to the State standard of 12.50 per cent. total solids and 3 per cent. of butter fat. His cows had been eating a great deal of "green stuff," he said, and not being in the best condition were giving a poor, thin milk. He believed it would be condemned by the Milk Inspector and its sale would be stopped, thus causing him to suffer from the enforcement of an unreasonable law. He intimated that he could produce a much better quality of milk under ordinary circumstances. His fears were groundless, analysis showing results far above the standard.

	Per cent.
Total solids	13.80
Butter fat	4.68
Solids, not fat	9.12
Ash	.70

The people are entitled to this kind of milk, and if ordinary cows, not at their best, produce such excellent milk, the same and even better results can be secured by all other dairymen.

Positive evidence of adulteration is furnished, a fair sample of herd milk being taken:

(1.) When the Sp. gr., at 60 degrees F., is less than 1.029, the fat being normal, the milk is watered

(2.) When the Sp. gr., at 60 degrees F., is more than 1.035 and the fat less than 4 per cent., the milk is skimmed.

(3.) When the fat is less than 3 per cent. and the total solids more than 12.50 per cent., the milk is skimmed

(4.) When the fat is less than 3 per cent., and the Sp. gr. at 60 degrees F., is less than 1.0319, the milk is skimmed and watered.

From these irrefutable propositions it must appear that all objections to legal standards for milk are without substantial foundation, and are urged without sincerity.

Suspicion of adulteration, by skimming or watering, or both, is excited when the milk is close to the legal standard (this is a corollary of the proposition upon which minimum standards are based), and also when there is a lack of symmetry in the relative proportions of total solids, fat, and the solids not fat. In the latter case, suspicion is not always susceptible of proof by physicial inspection or chemical analysis.

A grave danger may be alluded to in this connection in the use of separator milk. The dairymen send their milk to a creamery where the milk from all the dairies in the district is mixed, the cream taken out by a centrifuge, and some of the separator milk may be sent back to the farms and some sent to the city. If the milk from any of these dairies should contain the specific bacilli of typhoid fever or diphtheria, the result would be the widest possible dissemination of disease through the infected milk."

It would seem from the above quotation from the Pennsylvania report that the experiences in that State are not dissimilar to those in other States. In reading the article one thing in particular should be noted, namely: That there, as elsewhere, samples have been taken and analyzed without knowledge of whether they were pure milk or not, and then an argument is based, on that analysis, against the standard. This is not new by any means. It is a method that has been adopted in the State of New York by men of sufficient experience in such matters to know better, but it seems to obtain when no better evidence is forthcoming. As an outgrowth of this sentiment that has been created, to the effect that the law was or might be oppressive, there has grown up a fear among some people similar to the one entertained by the man Painter above referred to, that their milk might be below the standard, not because the fear was well grounded but because a rumor to that effect has been circulated and the party having no knowledge to the contrary assumed that the rumor was correct. This has produced a condition whereby it has become difficult in some sections of the State to enforce the law, no matter what the evidence is. For instance: We have been treated to the spectacle of a witness coming on the stand for the defense in our milk cases, swearing he was a "pharmaceutist" (just why such a man is qualified as a chemist is probably best known to the deponent); he also swore that the milk that he analyzed was given to him sixty days from the date at which we took our sample and that it was sweet; that he analyzed it. He also swore that milk when put into a bottle without previous pasteurization, sterilization or without the use of any chemical preservatives and corked in, would keep seven years without souring. Notwithstanding the fact that the evidence given by the man who posed as a "pharmaceutist" doing chemical work and who analyzed the sample of milk was shown to be worthless by two chemists, eminent in their profession, whose ability and integrity never have been questioned, yet the evidence of this practically unknown and inexperienced pharmaceutist seems to have prevailed as the verdict was "no cause of action." I am of the opinion that this condition of things is due largely, if not entirely, to a sentiment that is being seduously worked up in that section of the State to the effect that our standard is too high, and that, therefore, people are liable to be wrongfully prosecuted. It is the experience of every State and country that has given any evidence upon the subject that a standard should be set, below which milk should not be sold upon the market as pure, and the facts as set forth by them would indicate that our standard was reasonably low. There is no question but what the standard is very low, particularly as to butter fat. It would seem to me that it ought to be plain that the entire consuming public are materially, if not vitally, interested in the outcome of this question. The people should not again be forced to take as milk anything that may be presented that bears the color and outward semblance of milk. If legislation is enacted which produces that condition of things, then they will be again at the mercy of all classes of men, including the slovens and dishonest, and there is no knowing what the results may be within our State.

My predecessors have called your attention on several occasions to the fact that the milk standard as fixed in this State was based upon facts determined by a large number of analyses made by chemists of known standing and ability, of milk of known purity taken in different parts of the world, and that its results indicated that milk should not have over 87½ per cent. of water, nor less than 12½ per cent. of total solids nor less than 3½ per cent. of butter fat. (See First Annual Report of the New York State Dairy Commissioner, pages 57 to 59, which reads as follows):

Percentage o Constituents in Average Milk.

"In order to detect the adulteration of milk by the addition of water or by the removal of cream, it becomes of great importance to determine whether the constituents of average milk vary between certain limits, and what these limits are.

"The constituents vary, and more especially the fatty matter, according to age, breed, time before or after calving, the quality of the food, condition of the animal, etc. But even taking into consideration these facts, we find that nature, in its endeavor to produce a healthy food for the young, will in a great measure overcome surroundings which are most antagonistic to the production of healthy, normal, milk.

"So much has been done to determine what the standard is, below which pure, healthy milk never falls, that we know now with absolute certainty that the variation in the constituents of average milk is between certain well-defined limits.

"The following tables, prepared from analyses of many investigations, and, as will be seen, from a very large number of cows, and from all parts of the world, show most conclusively what the limit or standard of purity is:

AUTHORITY OR ANALYST.	Number of cows.	Water.	Total solids.	Fat.	Solids, not fat.	Sugar.	Casein.	Salt.
James Bell	216	87.17	12.83	3.83	9.00	......	......	0.71
James Bell	24 dairies.	86.78	13.22	4.12	9.10	......	......	0.72
C. Estecourt	22 dairies.	87.26	12.74	3.37	9.37	......	......	.....
J. Carter Bell	183	86.40	13.60	3.70	9.90	......	......	0.76
J. Cameron	42	86.53	13.47	4.00	9.47	......	......	.....
C. Cameron	40	87.00	13.00	4.00	9.00	4.28	4.10	0.62
C. Cameron	100	86.75	13.85	4.60	9.25	......	......	.....
Fleischmann & Veith	120	87.78	12.22	3.20	9.02	......	......	.....
Veith	60	87.20	12.80	3.10	9.70	......	......	.....
Veith	9,120	86.97	13.03	3.52	9.51	......	......	.....
Wanklyn	Average.	87.50	12.50	3.20	9.30	......	......	.....
A. Winter Blyth	Average.	86.87	13.13	3.50	9.63	......	......	.....
Marchand	Average.	87.15	12.85	3.55	9.30	......	......	.....
Henry & Chevalier	Average.	87.02	12.98	3.13	9.85	4.77	4.48	0.60
Vernois Becquerel	Average.	86.40	13.60	3.60	10.00	......	......	.....
Payen	Average.	86.60	13.40	3.50	9.90	......	......	.....
O. C. Wiggin	58	85.92	14.08	4.01	10.07	4.29	4.99	0.79
E. Calder	27	87.23	12.77	3.32	9.45	......	......	.....
Sharpless	34	85.85	14.15	4.62	9.53	4.82	4.06	0.65
Haidlen	Average.	87.30	12.70	3.00	9.70	......	......	.....
Letherby	Average.	86.00	14.00	3.90	10.10	5.20	4.10	0.80
J. Konig	Average.	87.30	12.70	3.00	9.70	5.00	4.00	0.70
Boussingault	Average.	87.40	12.60	4.10	8.50	5.10	3.20	0.70
Muspratt	Average.	86.43	13.57	4.43	9.14	4.73	3.74	0.67
Dieulafait	Average.	87.64	12.36	3.11	9.25	4.22	4.18	0.85
Gronp Bezanez	Average.	85.70	14.30	4.31	9.99	4.04	5.40	0.55
Brinton	Average.	86.00	14.00	4.50	9.50	3.50	5.50	0.70
Chandler	1,700 qts.	87.45	12.55	3.83	8.72	......	......	.....
Newton	Average.	87.50	12.50	3.50	9.00	......	......	.....
Bartley	Average.	87.50	12.50	3.50	9.00	......	......	.....
White	Average.	87.50	12.50	3.50	9.00	......	......	.....
Waller	Average.	87.50	12.50	3.20	9.30	......	......	.....
Babcock	Average.	85.53	14.47	5.09	9.39	5.15	3.57	0.67
Church	Average.	86.30	13.70	3.70	10.00	5.10	4.10	0.80
Edward Smith	Average.	86.40	13.60	3.61	9.90	3.80	5.52	0.06
Martin	Average.	86.50	12.50	3.20	9.30	......	......	0.67

"The following table will show the result of the analyses of milk from herds in various sections of this State. All of the samples were milked in the presence of an inspector and delivered to me in the same condition as when taken from the cow:

Number of cows.	Water.	Fat.	Casein and sugar.	Salts.	Solids, not fat.	Total solids.	Number of inspection and analysis.
40	87.47	3.29	8.57	0.67	9.24	12.53	D 1504
28	87.34	3.33	8.56	0.67	9.23	12.66	D 1513
10	86.98	3.62	8.72	0.68	9.40	13.02	B 2561
1	87.05	3.40	8.92	0.63	9.55	12.95	B 2526
27	87.03	3.80	8.48	0.69	9.17	12.97	D 1585
1	84.71	3.79	10.81	0.69	11.50	15.29	B 2600
10	86.85	3.58	8.89	0.68	9.57	13.15	B 2694
11	87.34	3.44	8.52	0.70	9.22	12.66	D 1595
27	86.97	3.33	8.90	0.80	9.70	13.03	D 1666
1	81.47	6.24	8.48	0.71	9.29	15.53	B 2762
24	85.82	4 80	8.66	0.72	9.38	14.18	B 2772
14	86.67	3.49	9.12	0.72	9.84	13.33	B 2788
20	86.38	4.45	8.56	0.71	9.27	13.52	E 5
20	82.10	8.31	8.80	0.79	9.59	17.90	D 1703
31	86.19	4.64	8.40	0.77	9.17	13.81	C 1854
31	86.88	3 90	8.45	0.77	9.22	13.12	C 1855

"If then, we assume that in healthy, normal cow's milk there should be not more than 87.5 per cent. of water, 3.2 per cent. of fat, 9.3 per cent. of solids, not fat, and 12.5 per cent. of total solids, we are certainly well within the limits."

I have yet to learn of any facts that would seem to dispute, or be reasonably in conflict with the facts above referred to as set forth by one of my predecessors.

Notwithstanding all the evidence that has been accumulated by this and other States and foreign countries tending to show these facts, your honorable body or the committee representing you has been for a number of winters importuned to make modifications in the milk law, all importunities being based on allegations to the effect that the law was unjust, and yet the promotors of such measures have never yet given any instance where anybody had ever been harmed in any way by those enforcements, so I am inclined to say that the fears are entirely imaginary.

Under the enforcement of the present laws the reports of the dairy statistician in New York city shows, beginning with the year 1894, an increase of the amount of milk shipped in that city over 1893 of 1,814,651 gallons; for the year 1895, as compared with 1894, shows an increase of 14,072,260 quarts of milk, cream and condensed milk shipped into the city of New York; and the year 1896, as compared with 1895, shows an incerase of 29,703,600 quarts of milk, cream, and condensed milk; for the year 1897, as compared with 1896, shows an increase of 11,850,040 quarts of milk, cream and condensed milk.

This would seem to agree with the statement made by the assistant commissioner of agriculture in that division, who says, in substance, that a glance at the map of the territory from which the metropolitan division draws its milk is interesting; that while it used to get its supply from Long Island, Westchester and Orange counties, now dealers reach out beyond the boundaries of these counties to far-away Steuben, Herkimer and Oneida; that the milk supply is drawn two or three hundred miles to the consumers in New York.

This is true proportionately of the cities of other divisions of the State. The reports received at this office are to the effect that the wholesale and retail dealers in this commodity have almost abandoned the practice of watering milk, and that the enforcement of the agricultural law is practically the cause of it.

There is, however, one form of adulteration of milk that prevails to some extent yet, namely, the mixing of skimmed milk with pure milk in such proportions as to leave the result of the commodity still rich enough so that it will have 12 per cent. of total solids and 3 per cent. of butter fat. There is considerable of this done, in my judgment, and this department has no means of determining the fact, except by putting detectives at work watching the creameries and milk stations to get visible evidence of the fact. To do this would be so expensive that the appropriation made for our work would not suffice. My attention has been called to this fact by milkmen who are honest and desire to have it stopped, who suggest that a law should be passed by the Legislature requiring all milk vendors who sell or ship milk to the market to make a monthly report to this department, duly verified;

that that report be made on blanks furnished by the Department of Agriculture in which the Commissioner of Agriculture shall be informed relative to the milk and cream they have handled.

I submit the proposition to your honorable body for consideration.

SKIMMED MILK.

Section 31 of chapter 33 of the General Laws known as the Agricultural Law, the enforcement of which this Department is charged with, provides as follows:

> Section 31. When Prohibition Does Not Apply to Skim-Milk or Skim-Cheese. Except in the counties of New York and Kings, the prohibitions contained in this article against the sale of adulterated milk shall not apply to skim-milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming, sold for use in the county in which it is produced or an adjoining county, if it is sold for and as skimmed milk. The prohibitions in this article against the sale of cheese made from unadulterated milk or cream shall not apply to pure, skim-cheese made from milk which is clean, pure, healthy, wholesome and unadulterated except by skimming.

This Department has experienced considerable difficulty in enforcing the milk law so far as skimmed milk is concerned. The difficulty arises from the fact that certain milk peddlers sell both skimmed and pure milk from the cans that are on the same wagon. There is nothing upon the wagon itself to show the consuming public that there is skimmed milk there for sale, yet if one of our agents examines the milk he will be promptly notified that certain milk is skimmed and is being sold for skimmed milk, yet it is not altogether certain that when the inspector's back is turned that the milk is not dipped for pure milk. I have been informed that such is the case. Certain I am that our agents have examined milk and have been told that it was skimmed milk, being sold for such, when the analysis showed it to be badly watered milk. I am of the opinion that some legislation should be enacted providing that skimmed milk should not be sold with pure, so that there can be no doubt that the purchaser gets it as and for skimmed milk.

LACTOMETER.

Quite a little has been said in the press during the last year relative to the use of the lactometer by the agents of this Department, to the effect that it was an unreliable instrument, and that our men were prosecuting people for selling adulterated milk when their evidence was based upon their experiments made by the lactometer. For that reason I take this opportunity to call your attention to the fact that the lactometer is used for no such purpose. It is a modified hydrometer used by our agents for determining the specific gravity of milk and for that only. The temperatures at which the milk is examined are any temperature between fifty and seventy degrees Fahrenheit. If the specific gravity of the milk is not right at the given temperature and it does not look right to the agent, he then takes a sample in accordance with the law and submits it to the chemist. This sample is analyzed and upon that analysis this Department acts, if at all, so that you will readily see that the lactometer is used only by our agents for the purpose of determining whether they had better take a sample for chemical anlysis.

OLEOMARGARINE.

The experience in the work of oleomargarine during the past year has been about the same as for the last few years. The violations of the agricultural law relative to the sale of this peculiarly fraudulent product have been clandestine and it has required continued vigilance in order to detect the sales that were being made by the persons dealing in it. The main effort on the part of the dealers in this product was made by dealers living outside of our State endeavoring to induce the keepers of hotels, boarding-houses, restaurants and semi-public institutions to buy it for cooking purposes and for consumption upon the table in place of butter. It is in every instance found to be a close imitation of butter, in looks, smell and taste, so that there can be no doubt that the motive in making it in that way was to deceive the consumer wherever he might be. There are a few persons who are, with the full knowledge of the law of this State, endeavoring to systematically place these goods in this State in violation of the law, but to so do it as to elude the agents of this Department. I am utilizing the force to the best possible advantage, with the means at my command, to stop the traffic and to prevent the deception that is being practiced upon the consumer aside from the interests above spoken of. The largest part, if not nearly all, is sold in New York and Brooklyn and in the river towns north of New York. Most of the cases we have been able to make have been in New York city. For a detailed statement of the work relative to this commodity please see the reports of the assistant commissioners herewith submitted.

PEOPLE v. ARMOUR.

Since my last report to you the changes in the status in this case have been very little. What litigation has been had has been confined to the struggle between the attorneys for the people and the attorneys for Armour & Company over the question as to whether the State should be allowed to examine the books of certain railroad companies to ascertain the amount, if any, of oleomargarine shipped into this State by Armour & Company during the pendency of the injunction issued by Mr. Justice Coxe of the Circuit Court in March, 1894, which he vacated on motion of the attorney representing this Department in December of the same year. The injunction reads as follows:

"At a special term of the Circuit Court of the United States of America, for the Northern District of New York, in the Second Circuit, held at the United States court rooms in the city of Utica, on the 3d day of March, A. D., 1894.

Present — Hon. Alfred C. Coxe, Judge.

PHILIP D. ARMOUR ET AL.

against

FREDERICK C. SCHRAUB ET AL.

On reading and filing the order to show cause why an injunction should not be granted herein, dated February 1, 1894, and upon the papers on which the said order to show cause was granted, and also upon the supplemental affidavits now on file in this court, and after reading the defendant's answer and affidavits in opposition thereto, filed February 13, 1894:

Now, after hearing Mr. Edwin H. Risley, of counsel for the complainants, in favor of said motion, and Mr. Charles D. Adams, of counsel for the defendants, and Mr. Frederick C. Schraub appearing in person, in opposition thereto, it is

Ordered, That the defendant Frederick C. Schraub, as Commissioner of Agriculture of the State of New York, his agents, servants and employees be restrained, until the further order of this court, from prosecuting any suits in the courts of the State of New York against the complainants or their agents to restrain them from importing or selling within this State oleomargarine in original packages, and from interfering in any manner with the complainants or their agents regarding such original packages.

This order is upon the express condition, however, that until the further order of the court, the complainants shall not establish any agencies within this State for the sale of oleomargarine in original packages in addition to those already existing, viz.: one each in the cities of New York, Albany, Utica, Rochester and Buffalo.

This order is upon the further condition that during the like period the complainants are to take out no additional licenses under the revenue laws of the United States for the sale of oleomargarine in original packages within this State, but this provision is not intended to prohibit a renewal of existing licenses. Nothing in this order shall be construed to restrain the said commissioner, his deputies or agents from prosecuting any person manufacturing oleomargarine in this State, or any person dealing in or selling oleomargarine in broken packages after they become mingled in the common mass of property within this State, or from prosecuting any person who sells oleomargarine fraudulently, representing it to be butter, whether in original packages or otherwise.

Either party, upon proof that the conditions of this order have been violated, may apply, upon notice, to vacate or modify the same, it being the intent and purpose of this order to preserve, as far as possible, the present status in this State and to keep unimpaired the existing rights of both the complainants and defendants, pending the determination of the questions involved by the Supreme Court of the United States. It also appearing that there are now pending in the Supreme Court of the State of New York two actions, begun, respectively, by the defendant Schraub in the name of The People of the State against William H. Hackett, of Utica, N. Y., and Arthur Frost, of Rochester, N. Y., in which action some of the questions involved in this action are also pending; it is

Further ordered, That the defendant Schraub may, if he so desires, prosecute to final hearing and decision one of said actions, and may have 30 days from the date of this order in which to elect which of said actions he will prosecute, and having so elected, the stay heretofore granted is to apply to the other of said actions.

Nothing in this order shall apply to any suit begun by the defendant Schraub in the name of The People of the State prior to the filing of this bill.

ALFRED C. COXE,
U. S. J.

The order vacating the injunction reads as follows:

UNITED STATES CIRCUIT COURT.

Northern District of New York.

PHILIP D. ARMOUR ET AL.

against

FREDERICK C. SCHRAUB, COMMISSIONER, ETC., ET AL.

This motion having come on for hearing at a term of this Court, held at the United States Courthouse in the city of Utica on the 24th day of December, 1894, now, after hearing Mr. C. D. Adams in favor of said motion and Mr. E. H. Risley opposed, it is

Ordered, That the said motion be and the same is hereby granted and the said order of March 3, 1894, is hereby dissolved, vacated and discharged.

ALFRED C. COXE,
U. S. J.

The question involved in the Plumley case having finally been decided in favor of the constitutionality of the State law of Massachusetts, the particular feature of which was in dispute being the same or similar to one in our laws, namely: forbidding the manufacture, sale, offering or exposing for sale of any oleaginous substance in imitation or semblance of butter not the product of the dairy, left the firm of Armour & Company in the attitude under the injunction after it was vacated of having violated a constitutional State law providing they had offered any such goods for sale within this State.

My predecessor in office immediately caused papers to be served on Armour & Company, or its representative, to recover a certain amount of money which he assumed that that company owed this State for violations during the time of the existence of the injunction. He then proceeded to find out what he could from railroad companies which he assumed had as common carriers brought these goods into the State for Armour & Company. Being unable to obtain the evidence he desired he got an order from the court for certain railroad companies to show cause why they should not allow the attorneys for the State to examine their books to get this information. The battle since that time has been upon this question and the State has finally obtained the right to examine these books and a referee has been appointed to take the evidence.

VINEGAR.

Article 3 of Chapter 338 of the Laws of 1893, of the Agricultural Law, is entitled "Adulterated Vinegar," and provides as follows:

ARTICLE III.

ADULTERATED VINEGAR.

Section 50. Definition of adulterated vinegar.
51. Manufacture and sale of adulterated or imitation vinegar prohibited.
52. Packages containing cider vinegar to be branded.
53. Penalties.

Section 50. **Definition of Adulterated Vinegar.**—All vinegar which contains any proportion of lead, copper, sulphuric acid, or other ingredients injurious to health, or any artificial coloring matter, or which has not an acidity equivalent to the presence of at least four and one-half per centum, by weight, of absolute acetic acid or cider vinegar which has less than such an amount of acidity, or less than two per centum of cider vinegar solids on full evaporation over boiling water, shall be deemed adulterated. The term cider vinegar, when used in this article means vinegar made exclusively from pure apple juice.

Section 51. **Manufacture and Sale of Adulterated or Imitation Vinegar Prohibited.**—No person shall manufacture for sale, keep for sale, or offer for sale:

1. Any adulterated vinegar.
2. Any vinegar or product in imitation or semblance of cider vinegar which is not cider vinegar.
3. As or for cider vinegar, any vinegar or product which is not cider vinegar.

Section 52. **Packages Containing Cider Vinegar to be Branded.**—Every manufacturer or producer of cider vinegar shall plainly brand on the head of each cask, barrel, keg or other package containing such vinegar, his name and place of business and the words "cider vinegar." And no person shall mark or brand as or for cider vinegar any package containing that which is not cider vinegar.

Section 53. **Penalties.**—Every person violating the provisions of this article shall forfeit and pay to the people of the State the sum of one hundred dollars for each violation.

This law I have judiciously enforced during the year. I have found some cases where it seemed to me that the right thing to do was to notify the parties handling the vinegar to be careful about future sales and let the matter rest there. It was in cases where, for instance, a small grocer doing scarcely a living business had part of a barrel of vinegar which he had bought of some farmer which did not show the required amount of acidity, but had sufficient solids so that when the sugar was fully developed in the cider there would have been sufficient acidity and solids both, in other words, he was selling hard cider, better known as cider vinegar stock. In case of adulteration of vinegar by the addition of water, we have prosecuted, as a rule, if they did not settle, to a determination by the court. I have given instructions to the assistant commissioners to use all possible diligence to ascertain the presence of any colored or imitation vinegar, or vinegar that had been fortified with pyroligneous acid. We have made quite a number of cases, and while I do not believe this class of goods has been driven from the market of this State, still I do believe that the sale has been reduced to the minimum, and it is only a question of time when they will have to cease.

CONTAGIOUS AND INFECTIOUS DISEASES.

Under the provisions of article 4 of chapter 338 of the Laws of 1893 this Department has charge of the enforcement of the law tending to restrain or eradicate all contagious and infectious diseases, excepting tuberculosis and glanders, affecting domestic animals that may be brought into or break out within the borders of this State. There have not been during the past year a great number of outbreaks, nor a condition that might be called an epidemic. There has broken out, however, among the animals of this State in a few localities the infectious or contagious diseases of anthrax, Texas fever, hog cholera, swine plague and rabies.

Rabies has broken out in the counties of Saratoga and Columbia, but has by the diligent effort of the experts of this Department been controlled and confined. The other diseases have broken out in a few places within the State. For details as to these diseases and the care that this department has given them, see the reports of Assistant Commissioner Henry S. Ambler, Dr. Wm. Henry Kelly, Dr. H. B. Ambler, Prof. V. A. Moore and Agent M. Quigley, hereto attached. From the little experience that we have had in this Department with these and other diseases which upon investigation did not prove to be contagious shows that they are largely due to unhealthy and dirty surroundings or bad food. For this reason I am of the opinion that the liability of animals to contract disease would be greatly lessened if their sanitary surroundings were so improved as not to invite or encourage the disease. I have, therefore, done what I reasonably could under the law during the past year to encourage, among persons having such animals in care or custody, a cleanliness of surroundings for all inclosures of buildings and yards in which domestic animals were kept and a proper supply of pure air and cleansing at reasonable intervals. The danger of the spreading of these contagious diseases would, in my judgment, be reduced to a minimum by observing proper sanitary regulations. I believe also that many of the milk gathering stations and factories of this State could be improved in this respect by a proper inspection at frequent intervals. This work certainly could do no harm, and, in my judgment, would do a great deal of good, as it would tend to lessen if not do away with the danger that comes to the milk consuming public through milk as a medium. It is a fact that does not need verification from me that some of the milk gathering stations and factories in this State are in a condition which absolutely requires such supervision. There are many, a majority, that are not in this condition.

There have been few or no calls on this Department during the past year for aid relative to the infectious and contagious diseases known as black knot and yellows that exists among fruit trees.

There have been two complaints made to this Department relative to the infectious and contagious disease known as foul brood among bees.

FARMERS' INSTITUTES.

The work of the Farmers' Institutes this year has been larger than ever before. The Director informs me he has received calls for nearly one thousand Institutes, a call which I understand to be unparalleled in the history of Farmers' Institutes in this State. This seems to speak well for the work, indicating that it is not only imparting useful information, but that it is well received.

SUGAR BEETS.

Chapter 500 of the Laws of 1897 became such by the approval of the Governor, May 18, 1897. The law reads as follows:

CHAPTER 500.

An act to amend the agricultural law, relative to the promotion of sugar beet culture by scientific and practical experiment, and making an appropriation therefor.

Became a law May 18, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled " An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," is hereby amended by inserting after article four, a new article to be known as article five, and to read as follows:

ARTICLE V.

SUGAR BEET CULTURE.

Section 71. Commissioner of agriculture to apportion moneys appropriated for promotion of sugar beet culture.
72. Persons, et cetera, to whom moneys may be apportioned.
73. Statements; inspections, branding of packages.
74. Inspectors, to be appointed by commissioner.
75. Weighman, powers and duties.
76. Apportionment of moneys by commissioners of agriculture.

Section 71. **Commissioners of agriculture to apportion moneys appropriated for promotion of sugar beet culture.** Money appropriated for the promotion of sugar beet culture by scientific and practical experiment shall be appropriated by the commissioners of agriculture to the persons, firms, associations or corporations entitled thereto, according to the provisions of this article.

§ 72. **Persons, et cetera, to whom moneys may be distributed.** Any person, firm association or corporation, engaged in the manufacture of sugar from beets grown in the state of New York, upon registration in the office of the commissioner of agriculture, and filing a certificate therein, stating the name of such person, firm, association or corporation, the location of the factory, and the capacity thereof, and the time when the manufacture of sugar began or is to begin, shall be entitled to a distributive share of the amount appropriated for the promotion and encouragement of sugar beet culture, as provided in this article. No such person, firm, association or corporation shall receive any portion of the moneys so appropriated, unless all the beets used in the manufacture of such sugar are grown within the state of New York, and unless the grower received therefor a net sum of not less than five dollars per ton, and provided such beets are not grown by the manufacturer of such sugar. No money shall be distributed to such manufacturers unless the sugar manufactured by them shall contain at least ninety per centum of crystallized sugar. The commissioner of agriculture may expend such sum or sums as he may deem necessary or expedient, not exceeding ten per centum of the amount appropriated for the purposes of this article, in practical and scientific experiments in growing sugar beets in one or more sections of this state, for the purpose of determining the adaptability of the soil thereof for the production of sugar beets.

§ 73. **Statements; inspections, branding of packages.** The quantity and quality of sugar upon which said money is to be paid shall be determined by the commissioner of agriculture of this state, with whom all claimants shall, from time to time, file verified statements showing the quantity and quality of sugar manufactured by them, the price paid the producer for beets and upon which said money is claimed. The said commissioner shall, without unnecessary delay, visit or cause to be visited by such persons as he shall designate in writing, the factory where said sugar has been produced or manufactured, and take such evidence by the sworn testimony of the officers or employes of such factory or others, as to the amount and quality of sugar so manufactured, and the price paid for beets as to him or the person so designated by him shall appear satisfactory and conclusive. The sugar so manufactured shall be placed by the manufacturer in original packages, which shall be examined and branded by the said commissioner or person by him designated, with a suitable brand, showing the quantity and the quality of sugar contained in each of said packages, of which an accurate account shall be kept by said inspector, and filed in the office of the commissioner of agriculture of this state.

§ 74. **Inspectors to be appointed by commissioner.** It shall be the duty of the commissioner of agriculture to appoint a resident inspector in each town or city where one or more manufactories of sugar may be located in this state, the aggregate output of which factories shall exceed two thousand pounds of sugar per day, and such examiner shall make such examinations, take such evidence and make such records and reports as is specified in section two of this act. The compensation or fee for such service of said inspector shall not exceed the sum of twenty-five cents for each package so branded, nor the sum of five dollars per day for any one day's service, and such resident inspector shall be required to give a good and sufficient bond in the sum of not less than two thousand dollars to the state of New York, contingent on the faithful performance of his duties, said bond to be approved by the said commissioner of agriculture. Said fees or compensation, together with the cost of said brand and any and all analysis that the said commissioner of agriculture or other authorized inspector shall require to be made, shall be borne and paid by the claimant of said money.

§ 75. **Weighman, powers and duties.** It shall be the duty of the commissioner of agriculture to appoint at each sugar manufactory in this state where the output of such manufactory shall exceed two thousand pounds of sugar per day, a person who shall weigh all beets received by the person or persons, corporation or association operating said manufactory. Such person shall be known as the weighman, and he shall keep accurate record of all duties performed by him. He shall discharge all duties pertaining to his position in an impartial manner, and shall furnish the commissioner of agriculture with a good and sufficient bond in the sum of two thousand dollars for the faithful discharge of his duties as prescribed by this act. The commissioner of agriculture may appoint such person or persons to assist said weighman as the service to be performed may require. Each person so appointed shall give bond as provided by this section. The weighman shall take into his possession, promptly on receipt of beets at such manufactory, such samples of beets as he deems fair and equitable, from which to remove dirt or other dockage. He shall then promptly weigh all beets from which samples have been taken and keep an accurate record of all weights, and all of such records shall show the names of both the seller and the buyer. The weights furnished by said weighman shall be accepted by both the seller and the buyer, and upon such weights so furnished settlement between the seller and the buyer shall be made. The compensation or fee allowed such weighman shall not exceed the sum of five dollars per day for time actually employed and for his assistants a sum not to exceed three dollars per day for the time actually employed. All expenses arising from the duties of said weighman or his assistants, as prescribed by this act, shall be paid by the person or persons, corporation or association operating such manufactory where such expense is incurred.

§ 76. **Distribution of moneys by commissioner of agriculture.** On or before the first day of February in each year, the commissioner of agriculture shall prepare a detailed statement of the quantity of sugar manufactured by each person, firm or association or corporation entitled to receive a portion of the moneys appropriated for the promotion and encouragement of sugar beet culture. He shall apportion to each such person, firm, association or corporation the moneys so appropriated according to the amount of sugar of the grade described in this article manufactured by each of them, düring the preceding year. Not more than one cent a pound shall be paid in any one year on account of the sugar so manufactured. Such commissioner of agriculture shall certify to the comptroller the amount apportioned to each manufacturer of sugar according to the provisions of this article; and the comptroller shall draw his warrant upon the state treasurer for the amount so certified, payable to the party or parties to whom such apportionment was made.

§ 2. Article five and six of said act are hereby made articles six and seven.

§ 3. The sum of twenty-five thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury not otherwise appropriated, to be paid in the manner prescribed in this act for the purpose of making effectual the provisions thereof.

§ 4. This act shall take effect immediately.

Immediately upon the passage of this act I sent one of my assistants to New York city to procure beet seed of the most improved kind for planting. He procured 100 kilos of beet seed, fifty kilos of which was a German beet known as Klein Wanzlebener, and fifty kilos of which was a French beet known as Vilmorin Improved, both of them thoroughbred beets.

I thereafter, as quickly as possible, made arrangements for fourteen patches with individuals in different parts of the State as follows:

Patch No. 1. Frederick & Severson, Altamont, N. Y.
Patch No. 2. J. P. Clark, Falconer, N. Y.
Patch No. 3. Herman L. Kent, Westfield, N. Y.
Patch No. 4. Henry S. Ambler, Chatham, N. Y.
Patch No. 5. L. D. Taylor, Cortland, N. Y.
Patch No. 6. Geo. M. Gillette, Bergen, N. Y.

Patch No. 7. Wm. Gilligan, Lowville, N. Y.
Patch No. 8. Reuben Morey, Eaton, N. Y.
Patch No. 9. Geo. W. Sime, Brockport, N. Y.
Patch No. 10. C. H. Philo, Washington Mills, N. Y.
Patch No. 11. A. J. Hainer, Cobleskill, N. Y.
Patch No. 12. Horace G. Tennant, Schoharie, N. Y.
Patch No. 13, Arthur Flanders, Hopkinton, N. Y.
Patch No. 14. J. N. Witherill, Arcade, N. Y.

With each one of the above named persons arrangements were entered into whereby they should each put in one-half acre of beets, one-half of which should be of the variety known as Klein Wanzlebener and the other half known as Vilmorin Improved, with the exception of Henry S. Ambler, of Chatham, N. Y., who put in an entire acre.

The arrangements made with each of these persons was in substance as follows: They should plow and prepare the ground and plant the seed as per the instructions given them. They were then to cultivate, thin out and weed the beets as per instructions, which were also given them. When this was done they should harvest the beets as per instructions, sending samples for analysis to the place I might indicate, and in the way or manner that I might name. This Department was to pay for all services and labor and for such other expenditures as were necessitated or required by it, and pay a given sum to the party furnishing the ground for the use of the same and for the daily and weekly reports that were to be made to this office on blanks furnished, so that we might have suitable data relative to the planting and growing of the said beets. The amount to be paid was in most cases $25, with one or two exceptions, where the parties agreed for $20.

Sugar Beet Crop Reports.

PATCH No. 1.

REPORT FOR WEEK ENDING MAY 29, 1897.

May 28.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 56° F.; partly cloudy; planted.

May 29.—6 a. m., 55° F. Noon, 58° F. 6 p. m., 52° F.; rainfall, .10 inch; cloudy.

General remarks.—Corn stubble; spring plowed; harrowed with Acme harrow; cross-harrowed with same; planked, then harrowed again. Ground was in good condition when seed was sown. Sowed seed with New Model drill, about fifteen pounds per acre.

REPORT FOR WEEK ENDING JUNE 5, 1897.

May 30.—6 a. m., 57° F. Noon, 66° F. 6 p. m., 63° F.; clear.

May 31.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 69° F.; partly cloudy.

June 1.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 61° F.; partly cloudy.

June 2.—6 a. m., 58° F. Noon, 63° F. 6 p. m., 60° F.; clear.

June 3.—6 a. m., 63° F. Noon, 70° F. 6 p. m., 65° F.; rainfall, .80 in.; showery; seed germinated.

June 4.—6 a. m., 64° F. Noon, 79° F. 6 p. m., 67° F.; rainfall, .25 in.; partly cloudy.

June 5.—6 a. m., 65° F. Noon, 76° F. 6 p. m., 68° F.; clear; some beets out of the ground.

General remarks.—Somewhat of a crust formed over the seed, but the rain coming just as the beets were trying to get through so softened the crust as to allow them to come up easily.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 61° F. Noon, 69° F. 6 p. m., 64° F.; partly cloudy.

June 7.—6 a. m., 58° F. Noon, 77° F. 6 p. m., 60° F.; cloudy; beets out of ground; getting a good stand.

June 8.—6 a. m., 52° F. Noon. 65° F. 6 p. m., 60° F.; cloudy.

June 9.—6 a. m., 50° F. Noon, 54° F. 6 p. m., 53° F.; rainfall, 3.28 in.; cloudy.

June 10.—6 a. m., 53° F. Noon, 64° F. 6 p. m., 63° F.; rainfall, .07 in.; cloudy.

June 11.—6 a. m., 63° F. Noon, 75° F. 6 p. m., 66° F.; rainfall, .04 in.; partly cloudy.

June 12.—6 a. m., 62° F. Noon, 76° F. 6 p. m., 66° F.; clear.

General remarks.—The following is a list of our charges against the Department up to date: May 25, plowing (man and team), one-half day, $2; May 27, plowing, harrowing, etc., $4; May 28, measuring and making plot, two hours, 30 cents; May 28, sowing seed, eight hours, $1.20; June 11, repairing rain gauge, 10 cents.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 59° F. Noon, 77° F. 6 p. m., 58° F.; rainfall, .03 in.; partly cloudy.

June 14.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 62° F.; rainfall, .45 in.; partly cloudy.

June 15.—6 a. m., 53° F. Noon, 72° F. 6 p. m., 65° F.; partly cloudy.

June 16.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 66° F.; fair.

June 17.—6 a. m., 58° F. Noon, 83° F. 6 p. m., 72° F.; fair.

June 18.—6 a. m., 62° F. Noon, 77° F. 6 p. m., 72° F.; fair.

June 19.—6 a. m., 56° F. Noon, 88° F. 6 p. m., 74° F.; fair.

General remarks.—Beets not growing as well as should on account of cold weather. A small portion of plot was drowned out with the heavy rains, but will fill in by transplanting, so as to get an even stand.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 74° F. Noon, 70° F. 6 p. m., 58° F.; fair.

June 21.—6 a. m., 48° F. Noon, 59° F. 6 p. m., 67° F.; fair.

June 22.—6 a. m., 48° F. Noon, 76° F. 6 p. m., 65° F.; fair.

June 23.—6 a. m., 58° F. Noon, 82° F. 6 p. m., 80° F.; fair.

June 24.—6 a. m., 70° F. Noon, 85° F. 6 p. m., 80° F.; rainfall, .40 in.; partly cloudy.

June 25.—6 a. m., 72° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy.

June 26.—6 a. m., 67° F. Noon, 70° F. 6 p. m., 65° F.; fair.

General remarks.—Commenced putting on fertilizer on Friday, but had to stop on account of high wind.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 52° F. Noon, 65° F. 6 p. m., 60° F.; fair.

June 28.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 76° F.; fair.

June 29.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, 1.15 in.; cloudy.

June 30.—6 a. m., 66° F. Noon, 74° F. 6 p. m., 71° F.; fair.

July 1.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 78° F.; fair.

July 2.—6 a. m., 67° F. Noon, 82° F. 6 p. m., 75° F.; partly cloudy.

July 3.—6 a. m., 60° F. Noon, 88° F. 6 p. m., 84° F.; fair.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 78° F. Noon, 96° F. 6 p. m., 84° F.; clear.

July 5.—6 a. m., 78° F. Noon, 99° F. 6 p. m., 90° F.; clear.

July 6.—6 a. m., 80° F. Noon, 96° F. 6 p. m., 91° F.; clear.

July 7.—6 a. m., 78° F. Noon, 94° F. 6 p. m., 85° F.; clear.

July 8.—6 a. m., 81° F. Noon, 95° F. 6 p. m., 90° F.; clear.

July 9.—6 a. m., 79° F. Noon, 96° F. 6 p. m., 89° F.; clear.

July 10.—6 a. m., 80° F. Noon, 98° F. 6 p. m., 78° F.; clear.

General remarks.—Ground getting very dry and excessive heat causes beets to wilt very much, a few having died. Growing very well in general. Have not been able to transplant yet, on account of being too dry. July 9, spent three hours hoeing, 45 cents.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 74° F. Noon, 94° F. 6 p. m., 80° F.; rainfall, .20 in.; partly cloudy.

July 12.—6 a. m., 70° F. Noon, 84° F. 6 p. m., 74° F.; rainfall, .76 in.; cloudy.

July 13.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, 1.92 in.; cloudy.

July 14.—6 a. m., 63° F. Noon, 75° F. 6 p. m., 71° F.; partly cloudy.

July 15.—6 a. m., 58° F. Noon, 76° F. 6 p. m., 74° F.; clear.

July 16.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 85° F.; clear.

July 17.—6 a. m., 72° F. Noon, 82° F. 6 p. m., 74° F.; partly cloudy.

General remarks.—Growing finely. July 11, weeding and hoeing, six hours, 90 cents; July 16, weeding and hoeing, 12 hours, $1.80; July 17, weeding and hoeing, thirteen hours, $1.95.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 72° F. Noon, 88° F. 6 p. m., 82° F.; partly cloudy.

July 19.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 84° F.; rainfall, .02 in.; partly cloudy.

July 20.—6 a. m., 71° F. Noon, 92° F. 6 p. m., 85° F.; clear.

July 21.—6 a. m., 77° F. Noon, 91° F. 6 p. m., 84° F.; clear.

July 22.—6 a. m., 74° F. Noon, 77° F. 6 p. m., 73° F.; rainfall, 2.30 in.; partly cloudy.

July 23.—6 a. m., 70° F. Noon, 88° F. 6 p. m., 82° F.; partly cloudy.

July 24.—6 a. m., 73° F. Noon, 85° F. 6 p. m., 80° F.; clear.

General remarks.—The excessive rain having hindered us in hoeing and weeding, we now have to do considerable hand weeding. July 19, weeding, ten hours, $1.50; July 21, hoeing, ten hours, $1.50.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 72° F. Noon, 83° F. 6 p. m., 76° F.; rainfall, .15 in.; cloudy.

July 26.—6 a. m., 70° F. Noon, 76° F. 6 p. m., 68° F.; cloudy.

July 27.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 70° F.; cloudy.

July 28.—6 a. m., 65° F. Noon, 75° F. 6 p. m., 66° F.; rainfall, 1.18 in.; cloudy.

July 29.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, .20 in.; cloudy.

July 30.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, .10 in.; cloudy.

July 31.—6 a. m., 60° F. Noon, 73° F. 6 p. m., 68° F.; partly cloudy.

General remarks.—July 26, weeding, ten hours, $1.50; July 31, weeding, twenty hours, $3.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 56° F. Noon, 84° F. 6 p. m., 78° F.; rainfall, .15 in.; partly cloudy.

August 2.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 80° F.; clear.

August 3.—6 a. m., 74° F. Noon, 85° F. 6 p. m., 80° F.; clear.

August 4.—6 a. m., 76° F. Noon, 89° F. 6 p. m., 75° F.; clear.

August 5.—6 a. m., 60° F. Noon, 82° F. 6 p. m., 73° F.; clear.

August 6.—6 a. m., 56° F. Noon, 79° F. 6 p. m., 70° F.; partly cloudy.

August 7.—6 a. m., 61° F. Noon, 81° F. 6 p. m., 75° F.; partly cloudy.

General remarks.—August 2, hoeing, five hours, 75 cents; August 3, hoeing, five hours, 75 cents; August 5, hoeing, ten hours, $1.50; August 7, hoeing, five hours, 75 cents.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 62° F. Noon, 84° F. 6 p. m., 75° F.; clear.

August 9.—6 a. m., 64° F. Noon, 87° F. 6 p. m., 76° F.; partly cloudy.

August 10.—6 a. m., 63° F. Noon, 83° F. 6 p. m., 74° F.; cloudy.

August 11.—6 a. m., 67° F. Noon, 76° F. 6 p. m., 68° F.; partly cloudy.

August 12.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 62° F.; partly cloudy.

August 13.—6 a. m., 54° F. Noon, 70° F. 6 p. m., 62° F.; clear.

August 14.—6 a. m., 56° F. Noon, 90° F. 6 p. m., 80° F.; clear.

General remarks.—August 10, hoeing, eight hours, $1.20.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 73° F.; rainfall, .11 in.; partly cloudy.

August 16.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 72° F.; rainfall, .06 in.; partly cloudy.

August 17.—6 a. m., 60° F. Noon, 68° F. 6 p. m., 62° F.; rainfall, .05 in.; partly cloudy.

August 18.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 64° F.; partly cloudy.

August 19.—6 a. m., 55° F. Noon, 86° F. 6 p. m., 65° F.; rainfall, .30 in.; partly cloudy.

August 20.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 60° F.; partly cloudy.

August 21.—6 a. m., 50° F. Noon, 78° F. 6 p. m., 60° F.; partly cloudy.

General remarks.—August 16, hoeing, sixteen hours, $2.40; August 17, hoeing, twenty hours, $3; August 18, hoeing, twenty hours, $3; August 19, hoeing, four hours, 60 cents.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 78° F. Noon, 81° F. 6 p. m., 65° F.; partly cloudy.

August 23.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 70° F.; rainfall, 1.30 in.; partly cloudy.

August 24.—6 a. m., 62° F. Noon, 78° F. 6 p. m., 68° F.; rainfall, .05 in.; cloudy.

August 25.—6 a. m., 58° F. Noon, 75° F. 6 p. m., 63° F.; partly cloudy.

August 26.—6 a. m., 56° F. Noon, 69° F. 6 p. m., 61° F.; fair.

August 27.—6 a. m., 54° F. Noon, 83° F. 6 p. m., 76° F.; partly cloudy.

August 28.—6 a. m., 58° F. Noon, 79° F. 6 p. m., 60° F.; clear.

General remarks.—August 23, hoeing, three hours, 45 cents.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 63° F. Noon, 87° F. 6 p. m., 76° F.; clear.

August 30.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 69° F.; clear.

August 31.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 68° F.; clear.

September 1.—6 a. m., 55° F. Noon, 80° F. 6 p. m., 70° F.; partly cloudy.

September 2.—6 a.m., 60° F. Noon, 69° F. 6 p.m., 65° F.; rainfall, .55 in.; partly cloudy.

September 3.—6 a. m., 55° F. Noon, 73° F. 6 p. m., 68° F.; clear.

September 4.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 66° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 65° F. Noon, 89° F. 6 p. m., 76° F.; clear.

September 6.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 79° F.; clear.

September 7.—6 a. m., 63° F. Noon, 90° F. 6 p. m., 82° F.; clear.

September 8.—6 a. m., 65° F. Noon, 87° F. 6 p. m., 76° F.; clear.

September 9.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 75° F.; partly cloudy.

September 10.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 68° F.; partly cloudy.

September 11.—6 a. m., 65° F. Noon, 88° F. 6 p. m., 81° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 65° F. Noon, 86° F. 6 p. m., 78° F.; partly cloudy.

September 13.—6 a. m., 64° F. Noon, 82° F. 6 p. m., 73° F.; rainfall, .16 in.; cloudy.

September 14.—6 a. m., 58° F. Noon, 75° F. 6 p. m., 67° F.; clear.

September 15.—6 a. m., 53° F. Noon, 79° F. 6 p. m., 68° F.; clear.

September 16.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 66° F.; partly cloudy.

September 17.—6 a. m., 54° F. Noon, 73° F. 6 p. m., 64° F.; partly cloudy.

September 18.—6 a. m., 52° F. Noon, 78° F. 6 p. m., 65° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 50° F. Noon, 79° F. 6 p. m., 67° F.; partly cloudy.

September 20.—6 a. m., 60° F. Noon, 67° F. 6 p. m., 63° F.; rainfall, .78 in.; cloudy.

September 21.—6 a. m., 51° F. Noon, 64° F. 6 p. m., 52° F.; partly cloudy.

September 22.—6 a. m., 34° F. Noon, 66° F. 6 p. m., 50° F.; clear.

September 23.—6 a. m., 45° F. Noon, 62° F. 6 p. m., 57° F.; cloudy.

September 24.—6 a. m., 53° F. Noon, 65° F. 6 p. m., 62° F.; rainfall, .79 in.; cloudy.

September 25.—6 a. m., 48° F. Noon, 78° F. 6 p. m., 69° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 55° F. Noon, 76° F. 6 p. m., 66° F.; rainfall, .11 in.; partly cloudy.

September 27.—6 a. m., 52° F. Noon, 56° F. 6 p. m., 46° F.; partly cloudy.

September 28.—6 a. m., 36° F. Noon, 54° F. 6 p. m., 48° F.; clear.

September 29.—6 a. m., 40° F. Noon, 62° F. 6 p. m., 55° F.; clear.

September 30.—6 a. m., 48° F. Noon, 78° F. 6 p. m., 60° F.; clear.

October 1.—6 a. m., 50° F. Noon, 80° F. 6 p. m., 68° F.; clear.

October 2.—6 a. m., 44° F. Noon, 76° F. 6 p. m., 52° F.; clear.

General remarks.—Beets are still growing. Some begin to show signs of ripening. In my estimation they should be harvested about the middle of this present month. Owing to the excessively wet season, only about one-fourth of the plot will yield a fair crop.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 31° F. Noon, 77° F. 6 p. m., 53° F.; clear.

October 4.—6 a. m., 31° F. Noon, 75° F. 6 p. m., 56° F.; clear.

October 5.—6 a. m., 34° F. Noon, 80° F. 6 p. m., 64° F.; clear.

October 6.—6 a. m., 41° F. Noon, 67° F. 6 p. m., 58° F.; partly cloudy.

October 7.—6 a. m., 48° F. Noon, 61° F.; 6 p. m., 52° F.; rainfall, .09 in.; cloudy.

October 8.—6 a. m., 40° F. Noon, 60° F. 6 p. m.. 53° F.; partly cloudy.

October 9.—6 a. m., 49° F. Noon, 63° F. 6 p. m., 50° F.; partly cloudy.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 30° F. Noon, 62° F. 6 p. m., 50° F.; partly cloudy.

October 11.—6 a. m., 40° F. Noon, 73° F. 6 p. m., 62° F.; partly cloudy.

October 12.—6 a. m., 54° F. Noon, 75° F. 6 p. m., 56° F.; rainfall, 1.04 in.; cloudy.

October 13.—6 a. m., 48° F. Noon. 62° F. 6 p. m., 55° F.; clear.

October 14.—6 a. m., 43° F. Noon, 68° F. 6 p. m., 53° F.; clear.

October 15.—6 a. m., 57° F. Noon, 85° F. 6 p. m., 74° F.; clear.

October 16.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 78° F.; partly cloudy.

General remarks.—Beets ripening rapidly; in our estimation should be harvested the coming week.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 41° F. Noon, 58° F. 6 p. m., 52° F.; partly cloudy.
October 18.—6 a. m., 38° F. Noon, 62° F. 6 p. m., 55° F.; partly cloudy.
October 19.—6 a. m., 35° F. Noon, 73° F. 6 p. m., 62° F.; clear.
October 20.—6 a. m., 32° F. Noon, 69° F. 6 p. m., 51° F.; clear.
October 21.—6 a. m., 44° F. Noon, 76° F. 6 p. m., 57° F.; partly cloudy.
October 22.—6 a. m., 46° F. Noon, 65° F. 6 p. m., 56° F.; partly cloudy.
October 23.—6 a. m., 33° F. Noon, 59° F. 6 p. m., 48° F.; partly cloudy.

General remarks.—The beets being fit to harvest, began to harvest same on the 22d. Owing to the excessively hard rains that we have had, we had to dig them all, the ground being so compact that we could not pull them. Having planted them on a very low piece of land, they were flooded several times during the season and mostly drowned out, only about one-fourth of plot being worth harvesting. From one-half of the quarter acre planted to the Vilmorin we gathered 1,125 pounds, being at the rate of four and one-half tons to the acre. Had we planted them on higher ground would undoubtedly had a big yield.

FREDERICK & SEVERSON,
Experimenters.

ALTAMONT, N. Y., *October* 29, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 149 days, making 21 2-7 weeks; that the whole amount of rainfall in the whole time was 18.94; that the average rainfall per month was 3.81; that the average rainfall per week was .889; and that the average rainfall per day was .127; that the number of days on which the sun shone was 65; that the number of cloudy days was 51; that the number of days on which it rained was 33; the kind of soil on which this patch of beets was raised was clay loam; the amount of beets raised upon the patch would indicate that that soil would raise 4.50 tons of Vilmorin Improved per acre; the analysis of the Vilmorin Improved shows 15.14 percentage of sugar. This would indicate that that soil would raise beets that would produce 1362.60 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 2.

REPORT FOR WEEK ENDING JUNE 5, 1897.

May 31, June 1, 2, 3, 4 and 5, no rainfall.

General remarks.—Beets sown upon light sandy soil, upon which were raised crops of potatoes in 1896; heavily manured with stable manure at that time. Plowed June 1st nine inches deep and one-quarter acre subsoiled about ten inches below the plowing; thoroughly harrowed, then rolled. Beets sown June 2d and again rolled for the purpose of ensuring germination. Rows twenty-four inches apart and sown in such a manner as to extend across both the portion of field subsoiled and the one not so treated. Temperature very nearly 60° F.; no rainfall at time of sowing or during the week.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 7.—6 a. m., 61° F. Noon, 63° F. 6 p. m., 55° F.; rainfall, .80 in.; cloudy; heavy rain.

June 8.—6 a. m., 53° F. Noon, 54° F. 6 p. m., 52° F.; rainfall, .57 in.; cloudy.

June 9.—6 a. m., 51° F. Noon, 64° F. 6 p. m., 54° F.; partly cloudy; beets appearing above ground.

June 10.—6 a. m., 65° F. Noon, 67° F. 6 p. m., 69° F.; partly cloudy.

June 11.—6 a. m., 65° F. Noon, 68° F. 6 p. m., 65° F.; partly cloudy.

June 12.—6 a. m., 59° F. Noon, 73° F. 6 p. m., 70° F.; partly cloudy.

June 13.—6 a. m., 71° F. Noon, 70° F. 6 p. m., 65° F.; clear; beets one-half inch above ground.

General remarks.—The expense and date as follows: June 1, plowing one-half acre, $1; subsoiling one-quarter acre, 75 cents; harrowing, 75 cents; rolling, 25 cents; sowing fertilizer, 20 cents; sowing seed, 35 cents; rolling, 25 cents; total, $3.55.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 71° F. Noon, 70° F. 6 p. m., 65° F.; cloudy forenoon, clear afternoon; rainfall, .12 in.

June 14.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 68° F.; clear.

June 15.—6 a. m., 67° F. Noon, 73° F. 6 p. m., 66° F.; cloudy forenoon; clear afternoon.

June 16.—6 a. m., 64° F. Noon, 72° F. 6 p. m., 71° F.; cloudy forenoon; clear afternoon; rainfall, .02 in.

June 17.—6 a. m., 55° F. Noon, 64° F. 6 p. m., 71° F.; rainfall, .18 in.; cloudy; weather fine for growth.

June 18.—6 a. m., 55° F. Noon, 63° F. 6 p. m., 61° F.; rainfall, .04 in.; clear; beets about one inch above ground.

June 19.—6 a. m., 62° F. Noon, 60° F. 6 p. m., 80° F.; clear forenoon; cloudy afternoon.

General remarks.—Hoeing and loosening earth by rows, $2.25.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 55° F. Noon, 72° F. 6 p. m., 56° F.; rainfall, .28 in.

June 21.—6 a. m., 38° F. Noon, 70° F. 6 p. m., 53° F.

June 22.—6 a. m., 51° F. Noon, 65° F. 6 p. m., 55° F.

June 23.—6 a. m., 58° F. Noon, 83° F. 6 p. m., 76° F.

June 24.—6 a. m., 68° F. Noon, 85° F. 6 p. m., 78° F.

June 25.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 68° F.

June 26.—6 a. m., 61° F. Noon, 75° F. 6 p. m., 66° F.; fourth leaf formed on beets.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 43° F. Noon, 78° F. 6 p. m., 55° F.; clear.

June 28.—6 a. m., 42° F. Noon, 84° F. 6 p. m., 62° F.; partly cloudy.

June 29.—6 a. m., 62° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .13 in.; cloudy.

June 30.—6 a. m., 64° F. Noon, 79° F. 6 p. m., 72° F.; rainfall, .14 in.; clear forenoon; cloudy afternoon.

July 1.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 72° F.; clear.

July 2.—6 a. m., 62° F. Noon, 88° F. 6 p. m., 82° F.; clear.

July 3.—6 a. m., 62° F. Noon, 96° F. 6 p. m., 86° F.; clear; very dry; beets making slow growth.

General remarks.—June 28, cultivating, 40 cents; June 29, hoeing, $1.25; June 30, hoeing, $1.25; July 1, hoeing, $1.25.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 72° F. Noon, 96° F. 6 p. m., 86° F.; partly cloudy.

July 5.—6 a. m., 75° F. Noon, 96° F. 6 p. m., 80° F.; rainfall, .05 in.; partly cloudy.

July 6.—6 a. m., 70° F. Noon, 86° F. 6 p. m., 80° F.; partly cloudy.

July 7.—6 a. m., 60° F. Noon, 96° F. 6 p. m., 78° F.; clear.

July 8.—6 a. m., 68° F. Noon, 96° F. 6 p. m., 78° F.; rainfall, .13 in.; partly cloudy.

July 9.—6 a. m., 74° F. Noon, 98° F. 6 p. m., 89° F.; clear.

July 10.—6 a. m., 74° F. Noon, 98° F. 6 p. m., 88° F.; partly cloudy; beets two to three inches in height.

General remarks.—Hoeing five days, $6.25.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 70° F. Noon, 96° F. 6 p. m., 70° F.; rainfall, 1.95 in.; strip about four feet wide across field washed out by rain.

July 12.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 70° F.; rainfall, .35 in.

July 13.—6 a. m., 56° F. Noon, 81° F. 6 p. m., 68° F.

July 14.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 68° F.

July 15.—6 a. m., 58° F. Noon, 75° F. 6 p. m., 70° F.

July 16.—6 a. m., 57° F. Noon, 85° F. 6 p. m., 80° F.

July 17.—6 a. m., 68° F. Noon, 76° F. 6 p. m., 77° F.

General remarks.—Thinning and hoeing three and one-quarter days, $4.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 70° F. Noon, 70° F. 6 p. m., 68° F.; rainfall, .25 in.; cloudy.

July 19.—6 a. m., 66° F. Noon, 77° F. 6 p. m., 84° F.; rainfall, .75 in.; cloudy.

July 20.—6 a. m., 70° F. Noon, 86° F. 6 p. m., 68° F.; rainfall, .40 in.; cloudy.

July 21.—6 a. m., 67° F. Noon, 83° F. 6 p. m., 72° F.; rainfall, .23 in.; cloudy.

July 22.—6 a. m., 62° F. Noon, 81° F. 6 p. m., 75° F.; rainfall, .05 in.; cloudy.

July 23.—6 a. m., 66° F. Noon, 83° F. 6 p. m., 70° F.; rainfall, .45 in.; cloudy.

July 24.—6 a. m., 65° F. Noon, 74° F. 6 p. m., 70° F.; rainfall, .02 in.; cloudy.

General remarks.—Cultivating, 80 cents.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 68° F. Noon, 87° F. 6 p. m., 70° F.

July 26.—6 a. m., 70° F. Noon, 88° F. 6 p. m., 72° F.

July 27.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 72° F.; rainfall, .12 in.

July 28.—6 a. m., 66° F. Noon, 74° F. 6 p. m., 72° F.; rainfall, .19 in.

July 29.—6 a. m., 62° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .15 in.

July 30.—6 a. m., 64° F. Noon, 80° F. 6 p. m., 72° F.

July 31.—6 a. m., 66° F. Noon, 79° F. 6 p. m., 77° F.; rainfall, .21 in.

General remarks.—When the beets were nicely out of the ground large strips were destroyed by some kind of insect, leaving a very poor stand at present.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 66° F. Noon, 82° F. 6 p. m., 77° F.; clear.

August 2.—6 a. m., 66° F. Noon, 83° F. 6 p. m., 75° F.; clear.

August 3.—6 a. m., 63° F. Noon, 87° F. 6 p. m., 83° F.; partly cloudy.

August 4.—6 a. m., 63° F. Noon, 86° F. 6 p. m., 78° F.; partly cloudy.

August 5.—6 a. m., 65° F. Noon, 74° F. 6 p. m., 69° F.; rainfall, .08 in.; partly cloudy.

August 6.—6 a. m., 49° F. Noon, 78° F. 6 p. m., 74° F.; clear.

August 7.—6 a. m., 62° F. Noon, 87° F. 6 p. m., 78° F.; clear.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 60° F. Noon, 77° F. 6 p. m., 68° F.; rainfall, .08 in.; partly cloudy.

August 9.—6 a. m., 62° F. Noon, 83° F. 6 p. m., 78° F.; partly cloudy.

August 10.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .75 in.; partly cloudy.

August 11.—6 a. m., 62° F. Noon, 79° F. 6 p. m., 72° F.; rainfall, .08 in.; partly cloudy.

August 12.—6 a. m., 63° F. Noon, 78° F. 6 p. m., 66° F.; rainfall, .20 in.; partly cloudy.

August 13.—6 a. m., 56° F. Noon, 75° F. 6 p. m., 73° F.; rainfall, .07 in.; partly cloudy.

August 14.—6 a. m., 54° F. Noon, 83° F. 6 p. m., 80° F.; clear.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m , 63° F. Noon, 80° F. 6 p. m., 73° F.; rainfall, .05 in.; partly cloudy.

August 16.—6 a. m., 62° F. Noon, 75° F. 6 p. m., 64° F.; rainfall, .98 in.; cloudy.

August 17.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 65° F.; rainfall, .02 in.; clear.

August 18.—6 a. m., 64° F. Noon, 82° F. 6 p. m., 79° F.; rainfall, .23 in.; partly cloudy.

August 19.—6 a. m., 62° F. Noon, 69° F. 6 p. m., 64° F.; rainfall, .27 in.; partly cloudy.

August 20.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 64° F.; rainfall, .04 in.; partly cloudy.

August 21.—6 a. m., 48° F. Noon, 74° F. 6 p. m., 74° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 48° F. Noon, 78° F. 6 p. m., 63° F.; clear.

August 23.—6 a. m., 62° F. Noon, 79° F. 6 p. m., 71° F.; clear.

August 24.—6 a. m., 59° F. Noon, 79° F. 6 p. m., 69° F.; rainfall, .03 in.; partly cloudy.

August 25.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 68° F.; rainfall, .15 in.; partly cloudy.

August 26.—6 a. m., 46° F. Noon, 68° F. 6 p. m., 64° F.; clear.

August 27.—6 a. m., 50° F. Noon, 80° F. 6 p. m., 70° F.; clear.

August 28.—6 a. m., 59° F. Noon, 75° F. 6 p. m., 72° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 52° F. Noon, 81° F. 6 p. m., 77° F.; cloudy.

August 30.—6 a. m., 55° F. Noon, 70° F. 6 p. m., 67° F.; rainfall, .48 in.; partly cloudy.

August 31.—6 a. m., 48° F. Noon, 74° F. 6 p. m., 65° F.; clear.

September 1.—6 a. m., 59° F. Noon, 65° F. 6 p. m., 38° F.; clear.

September 2.—6 a. m., 64° F. Noon, 71° F. 6 p. m., 69° F.; rainfall, .22 in.; partly cloudy.

September 3.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 67° F.; clear.

September 4.—6 a. m., 50° F. Noon, 67° F. 6 p. m., 64° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 47° F. Noon, 80° F. 6 p. m., 74° F.; clear.

September 6.—6 a. m., 55° F. Noon, 83° F. 6 p. m., 73° F.; clear.

September 7.—6 a. m., 67° F. Noon, 87° F. 6 p. m., 70° F.; clear.

September 8.—6 a. m., 57° F. Noon, 86° F. 6 p. m., 76° F.; clear.

September 9.—6 a. m., 58° F. Noon, 85° F. 6 p. m., 80° F.; clear.

September 10.—6 a. m., 61° F. Noon, 91° F. 6 p. m., 78° F.; clear.

September 11.—6 a. m., 58° F. Noon, 82° F. 6 p. m., 73° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 79° F.; partly cloudy.

September 13.—6 a. m., 69° F. Noon, 86° F. 6 p. m., 74° F.; rainfall, .03 in.; partly cloudy.

September 14.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 69° F.; clear.

September 15.—6 a. m., 44° F. Noon, 82° F. 6 p. m., 68° F.; clear.

September 16.—6 a. m., 54° F. Noon, 92° F. 6 p. m., 81° F.; rainfall, .34 in.; partly cloudy.

September 17.—6 a. m., 64° F. Noon, 69° F. 6 p. m., 60° F.; partly cloudy.

September 18.—6 a. m., 39° F. Noon, 69° F. 6 p. m., 61° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 59° F. Noon, 62° F. 6 p. m., 59° F.; clear.

September 20.—6 a. m., 49° F. Noon, 51° F. 6 p. m., 48° F.; rainfall, .30 in.; partly cloudy.

September 21.—6 a. m., 30° F. Noon, 58° F. 6 p. m., 57° F.; clear.

September 22.—6 a. m., 31° F. Noon, 67° F. 6 p. m., 58° F.; partly cloudy.

September 23.—6 a. m., 42° F. Noon, 62° F. 6 p. m., 55° F.; rainfall, .02 in.; partly cloudy.

September 24.—6 a. m., 52° F. Noon, 66° F. 6 p. m., 63° F.; rainfall, .01 in.; partly cloudy.

September 25.—6 a. m., 37° F. Noon, 72° F. 6 p. m., 62° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 58° F. Noon, 76° F. 6 p. m., 61° F.; clear.

September 27.—6 a. m., 50° F. Noon, 56° F. 6 p. m., 54° F.; clear.

September 28.—6 a. m., 30° F. Noon, 63° F. 6 p. m., 56° F.; clear.

September 29.—6 a. m., 32° F. Noon, 71° F. 6 p. m., 64° F.; clear.

September 30.—6 a. m., 41° F. Noon, 80° F. 6 p. m., 65° F.; clear.

October 1.—6 a. m., 43° F. Noon, 77° F. 6 p. m., 64° F.; clear.

October 2.—6 a. m., 48° F. Noon, 77° F. 6 p. m., 62° F.; partly cloudy.

General remarks.—Beets show a few dead leaves; little or no second growth. Would probably be best to harvest about October 15th to October 20th.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 62° F.; clear.

October 4.—6 a. m., 28° F. Noon, 69° F. 6 p. m., 55° F.; clear.

October 5.—6 a. m., 34° F. Noon, 75° F. 6 p. m., 58° F.; clear.

October 6.—6 a. m., 50° F. Noon, 63° F. 6 p. m., 54° F.; partly cloudy.

October 7.—6 a. m., 48° F. Noon, 49° F. 6 p. m., 43° F.; rainfall, .15 in.; cloudy.

October 8.—6 a. m., 40° F. Noon, 63° F. 6 p. m., 49° F.; partly cloudy.

October 9.—6 a. m., 47° F. Noon, 57° F. 6 p. m., 47° F.; clear.

General remarks.—Beets show quite a large number dead leaves and many becoming lighter in color. Very little second growth appearing.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 22° F. Noon, 63° F. 6 p. m., 45° F.; clear.

October 11.—6 a. m., 61° F. Noon, 74° F. 6 p. m., 48° F.; rainfall, .21 in.; partly cloudy.

October 12.—6 a. m., 63° F. Noon, 67° F. 6 p. m., 57° F.; clear.

October 13.—6 a. m., 55° F. Noon, 69° F. 6 p. m., 58° F.; clear.

October 14.—6 a. m., 63° F. Noon, 72° F. 6 p. m., 57° F.; clear.

October 15.—6 a. m., 67° F. Noon, 83° F. 6 p. m., 70° F.; clear.

October 16.—6 a. m., 61° F. Noon, 75° F. 6 p. m., 56° F.; partly cloudy.

General remarks.—A portion of row 50 feet long of each variety of beets harvested October 15th, was taken, and 50 pounds of each forwarded to Dr. W. H. Jordan, Director of Geneva Agricultural Experiment Station, October 21st. Yield of Vilmorin Improved, 3.65 tons; of Klein Wanzlebener, 3.20 tons. Beets grown upon subsoiled portion of plat were much smoother, longer, and gave about 20 per cent. more yield. Cost of harvesting, two and seven-tenths days, $3.38.

J. P. CLARK,
Experimenter.

FALCONER, N. Y., *October* 25, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 139 days, making 19 6-7 weeks; that the whole amount of rainfall in the whole time was 12.37; that the average rainfall per month was 2.67; that the average rainfall per week was .623; and that the average rainfall per day was .089; that the number of days on which the sun shone was 52; that the number of cloudy days was 22; that the number of days on which it rained was 47; the kind of soil on which this patch of beets was raised was light sandy loam; the amount of beets raised upon the patch would indicate that that soil would raise 12.80 tons of Klein Wanzlebener per acre, and 14.60 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 15 per cent. of sugar and the Vilmorin Improved 14.60 percentage of sugar. This would indicate that that soil would raise beets that would produce 3840 pounds of sugar per acre from the Klein Wanzlebener and 4263.20 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 3.

REPORT FOR WEEK ENDING JUNE 5, 1897.

June 2.—6 a. m., 65° F. Noon, 70° F. 6 p. m., 68° F.; partly cloudy; planted first plot one-quarter acre.

June 3.—Noon, 70° F.; light showers about one-half hour; cloudy.

June 4.—6 a. m., 62° F. Noon, 68° F.; forenoon cloudy; middle day sun out; afternoon cloudy and some wind.

June 5.—6 a. m., 68° F. Noon, 70° F.; nice sunny day; no wind.

General remarks.—The above plot of one-quarter acre is located right in the heart of the town. Monday I will plant one-half acre more at the south end of the town. The climate back over the hills is very different than down along the lake shore, but the soil and condition of land and climate I think far better adapted for raising roots than down along the lake, although there are places on most all farms that would make good beet ground, and if you are so disposed I will test the two localities and make double reports. If you wish only the one plot of one-half acre, I will give the south plot for your control as that is the section that will no doubt produce the largest quantity of "Sugar Beets" and more available land in this part of the town. The one-quarter acre is in high state of cultivation and will no doubt produce a mammoth crop. The one-half acre to go out Monday is on my 300 acre farm and only a fair average piece of ground, but good condition for beets. Last year's crop, corn and turnips; very loose mellow soil; have 50 to 100 acres on this farm, that would, I think, be first-class beet ground; there are a large number of farms adjoining of similar soil.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 65° F.; fair.

June 7.—6 a. m., 60, F.; cloudy. Noon, 65° F.; rainfall, .26 in.; rainy from 10 to 1 a. m. and 2 to 6 p. m.; just coming up out of ground. 6 p. m., 62° F.

June 8.—6 a. m., 60° F. Noon, 58° F. 6 p. m., 55° F.; rainfall, .52 in.; cloudy forenoon; fine mist rain afternoon; rained all night; additional new sprouts showing to-day; last night's rain and afternoon mist sprouting seeds nicely.

June 9.—6 a. m., 53° F.; mist and fog. Noon, 58° F.; cloudy. 6 p. m., 63° F.; cloudy, with barometer just starting towards fair this afternoon; outline of rows to-day show more new sprouts.

June 10.—6 a. m., 68° F. Noon, 75° F. 6 p. m., 70° F.; cloudy; sun out about one hour during day; discarded cup and placed water gauge on plot.

June 11.—6 a. m., 68° F. Noon, 78° F.; bright sunny day.

June 12.—6 a. m., 78° to 80° F.; cloudy; part day sun out.

General remarks.—This sheet, also the previous sheet, you can destroy, as your letter directs to have the plot all in one place; so next Monday, June 21st, you will get the first report on the one-half acre plot, and on this plot no further record will be kept, more than the final testing of the beets.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 12.—Noon, 74° F. 6 p. m., 60° F.; partly cloudy; planted seeds to-day.

June 13.—6 a. m., 62° F. Noon, 64° F. 6 p. m., 64° F.; partly cloudy; phosphate drilled with seeds.

June 14.—6 a. m., 64° F. Noon, 76° F.; clear. 6 p. m., 72° F.; partly cloudy; used a grain drill, stopping up every second opening, making the rows about two feet apart.

June 15.—6 a. m., 70° F. Noon, 70° F. 6 p. m., 72° F.; partly cloudy.

June 16.—6 a. m., 58° F. Noon, 78° F.; partly cloudy. 6 p. m., 66° F.; cloudy.

June 17.—6 a. m., 56° F. Noon, 72° F. 6 p. m., 64° F.; cloudy.

June 18.—6 a. m., 54° F. Noon, 68° F.; partly cloudy. 6 p. m., 78° F.; clear.

June 19.—6 a. m., 58° F. Noon, 82° F. 6 p. m., 68° F.; cloudy.

General remarks.—This one-half acre plot is situated in the southwest part of the township of Westfield on a large 300 acre farm of ordinary farm land upon which corn was raised last year. This farm is in a dairy section and large quantities of potatoes, turnips and carrots are raised for stock purposes, and there is considerable available land in this section suitable for the growing of roots. I have also several other small plots on other lands and in different parts of the town testing in a private way. This plot the land was plowed deep, and manured before being plowed, dragged thoroughly, rolled and drilled with phosphate. Two days plowing and preparing land with team, $5. I will make the price of man and team work $2.50 per day and trust this will be satisfactory.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 54° F. Noon. 68° F. 6 p. m., 58° F.; rainfall, .05 in.; partly cloudy.

June 21.—6 a. m., 44° F. Noon, 68° F.; partly cloudy. 6 p. m., 58° F.; clear.

June 22.—6 a. m., 44° F.; partly cloudy. Noon, 72° F. 6 p. m., 68° F.; clear.

June 23.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 82° F.; partly cloudy.

June 24.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 76° F.; partly cloudy; beets just beginning to come up.

June 25.—6 a. m., 64° F.; cloudy. Noon, 74° F.; clear. 6 p. m., 64° F.; partly cloudy.

June 26.—6 a. m., 51° F. Noon, 62° F.; partly cloudy. 6 p. m., 65° F.; clear.

General remarks.—You will see that I am a little behind sending reports on Monday as required, this farm is eight miles from my office here in town and the report is sent to me first from this farm. The lack of rain has made beets slow in starting. My town plots put in before your seed for the above plot by about two weeks are looking finely, and if we have a rain within a few days this plot will go right along very rapidly as roots do finely on this farm. The variation of the temperature varies at noon some days considerable as you will see. The thermometer is hung on the "rain gauge" post and out in the sun when not cloudy.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 54° F. Noon, 73° F. 6 p. m., 72° F.; clear.

June 28.—6 a. m., 52° F.; cloudy. Noon, 76° F.; partly cloudy. 6 p. m., 70° F.; cloudy.

June 29.—6 a. m., 60° F. Noon, 66° F. 6 p. m., 70° F.; rainfall, .10 in.; cloudy.

June 30.—6 a. m., 66° F.; cloudy. Noon, 72° F. 6 p. m., 74° F.; rainfall, .30 in.; partly cloudy.

July 1.—6 a. m., 64° F. Noon, 88° F. 6 p. m., 68° F.; partly cloudy.

July 2.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 74° F.; partly cloudy.

July 3.—6 a. m., 69° F.; clear. Noon, 92° F. 6 p. m., 90° F.; partly cloudy.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 72° F. Noon, 98° F. 6 p. m., 78° F.; rainfall, .10 in.; partly cloudy.

July 5.—6 a. m., 72° F. Noon, 100° F. 6 p. m., 76° F.; partly cloudy; plants coming up very slow.

July 6.—6 a. m., 68, F.; cloudy. Noon, 86° F.; clear. 6 p. m., 76° F.; rainfall, .05 in.; cloudy.

July 7.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 78° F.; clear.

July 8.—6 a. m., 70° F.; clear. Noon, 90° F. 6 p. m., 78° F.; partly cloudy.

July 9.—6 a. m., 70° F. Noon, 94° F. 6 p. m., 98° F.; partly cloudy.

July 10.—6 a. m., 72° F.; partly cloudy. Noon, 86° F.; clear. 6 p. m., 86° F.; partly cloudy; do not seem to improve much to-day; and hot.

General remarks.—The dry weather and hot days seem to stop the advance in growth and unless we get more rainfall soon I am afraid these beets will not do very well. They were put out I think a month later than they should have been. Arrangements were made so late that it is rather against a crop unless frequent rains and conditions are very favorable. The sugar beet seed put in about two weeks earlier on my quarter acre lot, are doing finely, as they got a good start before the hot weather came on.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 66° F.; rainfall, 1 in.; partly cloudy.

July 12.—6 a. m., 60° F.; cloudy. Noon, 68° F.; partly cloudy. 6 p. m., 74° F.; rainfall, .45 in.; clear.

July 13.—6 a. m., 58° F.; clear. Noon, 74° F.; partly cloudy. 6 p. m., 68° F.; rainfall, .65 in.; cloudy.

July 14.—6 a. m., 55° F.; clear. Noon, 70° F.; partly cloudy. 6 p. m., 55° F.; rainfall, 1.45 in.; cloudy; about ruined the beets, also damaged other crops in its course; terrible hail storm occurred.

July 15.—6 a. m., 66° F. Noon, 76° F.; partly cloudy. 6 p. m., 86° F.; clear.

July 16.—6 a. m., 64° F.; clear. Noon, 80° F. 6 p. m., 70° F.; partly cloudy.

July 17.—6 a. m., 64° F.; partly cloudy. Noon, 72° F.; cloudy. 6 p. m., 66° F.; rainfall, .48 in.; partly cloudy.

General remarks.—The past week has been disasterous to the beet plot which was in a backward condition as explained to you in last report. The hail storm took a course of about one mile in width and eight miles long, reaching from the south part of the town to nearly the Lake "Erie" on the north, and injured the crops having wide leaves, such as corn, beets, turnips, and quite a damage done to the "grape" crop where this electrical storm made its course but was so narrow and short at the north but few vineyards suffered by being in its course. This was the worst hail storm this time of year that old pioneer farmers ever knew in this locality.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 66° F.; cloudy. Noon, 70° F.; partly cloudy. 6 p. m., 64° F.; rainfall, .15 in.; cloudy.

July 19.—6 a. m., 64° F.; cloudy. Noon, 68° F. 6 p. m., 60° F.; rainfall, .25 in.; partly cloudy; beets are a failure.

July 20.—6 a. m., 66° F.; cloudy. Noon, 84° F. 6 p. m., 65° F.; rainfall, 2.20 in.; partly cloudy.

July 21.—6 a. m., 68° F.; clear. Noon, 85° F. 6 p. m., 64° F.; partly cloudy.

July 22.—6 a. m., 69° F.; clear. Noon, 92° F.; partly cloudy. 6 p. m., 63° F.; rainfall, .55 in.; cloudy.

July 23.—6 a. m., 60° F.; partly cloudy. Noon, 64° F. 6 p. m., 64° F.; rainfall .10 in.; cloudy.

July 24.—6 a. m., 62° F. Noon, 64° F. 6 p. m., 61° F.; cloudy.

General remarks.—I wrote you fully last week in regard to this patch and asked you if I could not substitute the plots I first put out for you, which are in first-class condition and probably as thrifty beets as can be found in the State put out at the same time. You will remember I put out two one-quarter acre lots and at your request or wish I started out another one of one-half acre, as you stated you preferred to have it in all one place. These last ones were put out too late and in too dry a time and started very poorly and seemed to dry up, and quite a lot of seed never showed above ground.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 66° F.; cloudy. Noon, 80° F. 6 p. m., 65° F.; partly cloudy.

July 26.—6 a. m., 62° F.; partly cloudy. Noon, 80° F. 6 p. m., 64° F.; rainfall, .15 in.; cloudy.

July 27.—6 a. m., 62° F.; rainfall, .15 in.; cloudy. Noon, 66° F.; partly cloudy. 6 p. m., 64° F.; rainfall, .45 in.; cloudy.

July 28.—6 a. m., 62° F.; rainfall, .20 in. Noon, 66° F.; cloudy. 6 p. m., 64° F.; rainfall, .10 in.; partly cloudy.

July 29.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, .90 in.; cloudy.

July 30.—6 a. m., 58° F.; partly cloudy. Noon, 83° F.; cloudy. 6 p. m., 74° F.; rainfall, .30 in.; partly cloudy.

July 31.—6 a. m., 62° F.; clear. Noon, 82° F. 6 p. m., 72° F.; rainfall .37 in.; cloudy.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 76° F.; clear

August 2.—6 a. m., 78° F. Noon, 82° F. 6 p. m., 76° F.; clear.

August 3.—6 a. m., 70° F.; clear. Noon, 88° F.; cloudy. 6 p. m., 69° F.; partly cloudy.

August 4.—6 a. m., 64° F.; clear. Noon, 92° F.; partly cloudy. 6 p. m., 62° F.; cloudy.

August 5.—6 a. m., 64° F.; partly cloudy. Noon, 70° F. 6 p. m., 66° F.; rainfall, .20 in.; clear.

August 6.—6 a. m., 62° F. Noon, 70° F. 6 p. m., 60° F.; clear.

August 7.—6 a. m., 60° F.; clear. Noon, 80° F. 6 p. m., 66° F.; partly cloudy.

SUGAR BEET CROP REPORT FOR WEEK ENDING AUGUST 15, 1897.

August 9.—6 a. m., 70° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy.

August 10.—6 a. m., 70° F. Noon, 72° F. 6 p. m., 75° F.; rainfall, .15 in.; partly cloudy.

August 11.—6 a. m., 70° F.; cloudy. Noon, 75° F. 6 p. m., 72° F.; partly cloudy.

August 12.—6 a. m., 75° F. Noon, 76° F.; partly cloudy. 6 p. m., 74° F.; cloudy.

August 13.—6 a. m., 70° F. Noon, 75° F. 6 p. m., 74° F.; clear.

August 14.—6 a. m., 74° F.; clear. Noon, 75° F. 6 p. m., 74° F.; partly cloudy.

August 15.—6 a. m., 75° F.; cloudy.

General remarks.— This week this record has been changed to the original, first set out " beet plots " of one-quarter acre each, located right in town. The Hill one-half acre patch was a failure, not because the soil was not right but other reasons, too late, too dry, etc., when planted, and hail ruined what straggling plants there was about, so to make a fair test there should be a fair start and in season. Reports you have on the abandoned late plot will apply near enough for these plots as this season has been a very wet one, except in the first starting of beets. Both plots that I have now, original one-quarter acre plots, are in a very thrifty condition, large tops covering nearly the whole ground.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 16.—6 a. m., 60° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, .60 in.; cloudy; barometer 28.8.

August 17.—6 a. m., 65° F. Noon, 70° F. 6 p. m., 68° F.; partly cloudy; barometer 28.9.

August 18.—6 a. m., 65° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .15 in.; cloudy; barometer 29.

August 19.—6 a. m., 65° F. Noon, 65° F. 6 p. m., 68° F.; rainfall, .40 in.; cloudy; beets in fine condition and making large growth; barometer 28.9.

August 20.—6 a. m., 65° F. Noon, 70° F. 6 p. m., 65° F.; party cloudy; barometer 29.15.

August 21.—6 a. m., 60° F. Noon, 68° F. 6 p. m., 65° F.; partly cloudy; barometer 29.1.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 23.—6 a. m., 64° F. Noon, 70° F. 6 p. m., 65° F.; partly cloudy; weather favorable this week; no rain needed.

August 24.—6 a. m., 64° F.; partly cloudy. Noon, 68° F. 6 p. m., 62° F.; cloudy.

August 25.—6 a. m., 64° F. Noon, 74° F.; cloudy. 6 p. m., 62° F.; rainfall, .07 in.; partly cloudy.

August 26.—6 a. m., 62° F. Noon, 78° F. 6 p. m., 62° F.; clear.

August 27.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 68° F.; clear.

August 28.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 30.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 62° F.; rainfall, .50 in.; partly cloudy.

August 31.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 64° F.; clear; no bad effects from weather.

September 1.—6 a. m., 64° F. Noon, 74° F.; cloudy. 6 p. m., 66° F.; clear; weather favorable.

September 2.—6 a. m., 64° F. Noon, 74° F.; partly cloudy; rainfall, .15 in. 6 p. m., 64° F.; clear.

September 3.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 66° F.; clear.

September 4.—6 a. m., 62° F. Noon, 84° F.; 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 6.—6 a. m., 66° F. Noon, 90° F. 6 p. m., 78° F.; clear.

September 7.—6 a. m., 70° F.; partly cloudy. Noon, 86° F. 6 p. m., 70° F.; clear.

September 8.—6 a. m., 66° F. Noon, 92° F. 6 p. m., 72° F.; clear; beets doing nicely.

September 9.—6 a. m., 70° F. Noon, 95° F. 6 p. m., 76° F.; clear.

September 10.—6 a. m., 74° F. Noon, 94° F. 6 p. m., 74° F.; clear.

September 11.—6 a. m., 76° F. Noon, 80° F.; clear. 6 p. m., 76° F.; partly cloudy.

September 12.—6 a. m., nice day; 70° to 80° F.; nearly clear.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 13.—6 a. m., 68° F. Noon, 72° F. 6 p. m., 70° F.; clear; the beets do not seem to be enlarging much now; think they have made nearly the full growth; tops are yet green and beets of good size and very thrifty looking.

September 14.—6 a. m., 76° F. Noon, 80° F. 6 p. m., 78° F.; clear.

September 15.—6 a. m., 80° F. Noon, 85° F. 6 p. m., 82° F.; clear.

September 16.—6 a. m., 80 F. Noon, 85° F.; cloudy; rainfall, .15 in. 6 p. m., 78° F.; partly cloudy.

September 17.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 60° F.; partly cloudy.

September 18.—6 a. m., 45° F. Noon, 65° F. 6 p. m., 60° F.; partly cloudy.

September 19.—6 a. m., 70° F.; partly cloudy.

General remarks.—I let out the job on each plot at a cost of $10 for plowing, seeding, cultivation and all work, which is less than I think it would cost by day work. I also gave the use of about one-fourth acre of land adjoining for a garden, to the one taking care of beets, but this I made no charge for. The beets have been very nicely cared for. In the town plot I do not think a weed can be found in them.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 20.—6 a. m., 45° F.; rainfall, .12 in. Noon, 55° F. 6 p. m., 50° F.; partly cloudy.

September 21.—6 a. m., 50° F. Noon, 55° F. 6 p. m., 60° F.; partly cloudy.

September 22.—6 a. m., 55° F. Noon, 65° F. 6 p. m., 60° F.; partly cloudy.

September 23.—6 a. m., 50° F.; cloudy. Noon, 56° F. 6 p. m., 52° F.; partly cloudy.

September 24.—6 a. m., 55° F.; rainfall, .65 in. Noon, 65° F. 6 p. m., 62°.F.; partly cloudy.

September 25.—6 a. m., 60° F.; cloudy. Noon, 70° F. 6 p. m., 65° F.; clear.

September 26.—6 a. m., 75° F.; partly cloudy.

REPORT FOR WEEK ENDING OCTOBER 3, 1897.

September 27.—6 a. m., 60° F.; partly cloudy. Noon, 65° F. 6 p. m., 60° F.; clear.

September 28.—6 a. m., 40° F. Noon, 55° F. 6 p. m., 50° F.; clear.

September 29.—6 a. m., 48° F. Noon, 58° F. 6 p. m., 52° F.; clear; it has been so cool the beets seem to stand the prolonged dry spell all right; tops are green yet and show but little signs of withering, except on one corner, where a shade tree is near by.

September 30.—6 a. m., 64° F.; partly cloudy. Noon, 72° F. 6 p. m., 68° F.; clear.

October 1.—6 a. m., 68° F. Noon, 74° F. 6 p. m., 70° F.; clear.

October 2.—6 a. m., 60° F.; partly cloudy. Noon, 68° F. 6 p. m., 65° F.; clear.

October 3.—6 a. m., 75° F.; clear.

General remarks.—It has come to a time of the season that we are liable to have frosts, although the lake shores are generally the last section to get a frost. There has already been frosts—light frosts—back on the hills. The beets have a good growth and look fine.

REPORT FOR WEEK ENDING OCTOBER 10, 1897.

October 4.—6 a. m., 55° F. Noon, 70° F. 6 p. m., 60° F.; clear.

October 5.—6 a. m., 55° F. Noon, 75° F. 6 p. m., 68° F.; partly cloudy.

October 6.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 55° F.; partly cloudy.

October 7.—6 a. m., 50° F.; rainfall, .30 in.; cloudy. Noon, 55° F. 6 p. m., 48° F.; partly cloudy.

October 8.—6 a. m., 46° F.; partly cloudy. Noon, 42° F. 6 p. m., 36° F.; cloudy.

October 9.—6 a. m., 46° F.; cloudy; Noon, 42° F. 6 p. m., 36° F.; clear; no change since last week; still green tops.

October 10.—6 a. m., 40° F. Noon, 55° F.; clear.

General remarks.—We are liable to have frosts soon, and would like to have your instructions in regard to harvesting the beets. Over back of the hills the farmers have had several frosts, but on the lake there this grape-belt region is about the last locality in this State to be hit with frosts, says the committee for the Board of Trade. Here I distributed about 100 packages of sugar beets, and while they were put out too late, they are most of them doing finely where they have had care. I am satisfied that they can be grown here successfully if test is only right, and think it will be, as climate is right to grow sweet grapes, etc.

REPORT FOR WEEK ENDING OCTOBER 17, 1897.

October 11.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 68° F.; cloudy.

October 12.—6 a. m., 65° F.; rainfall, .80 in.; cloudy. Noon, 63° F. 6 p. m., 60° F.; partly cloudy.

October 13.—6 a. m., 55° F. Noon, 65° F. 6 p. m., 60° F.; clear.

October 14.—6 a. m., 70° F. Noon, 75° F. 6 p. m., 73° F.; clear.

October 15.—6 a. m., 75° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy; same general appearance as last week; tops still green, lower leaves on ground slightly turning at ends.

October 16.—6 a. m., 75° F. Noon, 78° F. 6 p. m., 75° F.; cloudy.

October 17.—6 a. m., 65° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 24, 1897.

October 18.—6 a. m., 45° F. Noon, 55° F.; clear. 6 p. m., 50° F.; partly cloudy.

October 19.—6 a. m., 50° F. Noon, 60° F. 6 p. m., 58° F.; cloudy and smoky all day; beet tops seem to keep green and center shows green growth; the outside leaves are mostly green, but some of the ends turning a little; beets have a good growth, and the coming week, latter part, think best to harvest, and will do so if not ordered otherwise.

October 20.—6 a. m., 60° F. Noon, 60° F.; rainfall, light. 6 p. m., 58° F.; sprinkling; cloudy and smoky all day.

October 21.—6 a. m., 60° F.; cloudy. Noon, 60° F. 6 p. m., 60° F.; partly cloudy.

October 22.—6 a. m., 58° F. Noon, 60° F.; cloudy. 6 p. m., 58° F.; clear.

October 23.—6 a. m., 50° F. Noon, 58° F. 6 p. m., 50° F.; clear.

October 24.—6 a. m., 45° F. Noon, 55° F.; clear.

General remarks.—Will send on, according to your orders, the beets to be tested.

REPORT FOR WEEK ENDING OCTOBER 30, 1897.

October 25.—6 a. m., 46° F. Noon, 55° F. 6 p. m., 50° F.; partly cloudy.

October 26.—6 a. m., 50° F.; cloudy and foggy. Noon, 55° F. 6 p. m., 56° F.; partly cloudy.

October 27.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 50° F.; clear.

October 28.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 60° F.; partly cloudy.

October 29.—6 a. m., 45° F. Noon, 48° F. 6 p. m., 46° F.; cloudy.

October 30.—6 a. m., 45° F. Noon, 48° F. 6 p. m., 46° F.; cloudy.

General remarks.—To-day Professor Roberts was in town, and I had him look at my beets; he says they show no signs of second growth, and need not hurry in harvesting, more than to get them out before frost is bad; will defer pulling them until next week, if favorable weather; tops still green.

REPORT FOR WEEK ENDING NOVEMBER 7, 1897.

November 1.—6 a. m., 54° F. Noon, 56° F. 6 p. m., 55° F.; rainfall, .70 in.; cloudy.

November 2.—6 a. m., 56° F.; cloudy. Noon, 58° F. 6 p. m., 54° F.; partly cloudy.

November 3.—6 a. m., 48° F. Noon, 55° F. 6 p. m., 50° F.; partly cloudy.

November 4.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 55° F.; partly cloudy; harvested the most of the beets; few rows left for late harvest.

November 5.—6 a. m., 54° F. Noon, 56° F. 6 p. m., 55° F.; cloudy.

November 6.—6 a. m., 52° F. Noon, 55° F. 6 p. m., 54° F.; rainfall, .15 in.; cloudy.

November 7.—6 a. m., 45° F.; partly cloudy.

General remarks.—In harvesting these beets we took two average rows, making a total length of 186 feet, for one row, putting them in piles, selecting an equal number from each pile, as directed; weighed the whole amount of the rows, figured out the rest on the same basis, and made the total harvest 13,600 pounds from the half-acre, if I have figured right, or at the rate of thirteen tons for an acre. In my report sent to the Station, I gave the summary of the weather as follows: June dry, and first half of July quite dry; last of July very wet, frequent rains; fore part of August quite dry and the last half wet; September quite a dry month; October cool and rained each week. Total rain fall during the crop, about fifteen inches. We are saving a few rows for late harvest, which may be caught by freezing, but if weather is favorable, would like to send a few for analysis later. We will send only two, or another fifty pounds, if you wish. The general complaint of those putting in seed as late as we did is that the beginning of the crop it was rather dry weather, but by extra good care we succeeded in getting a good crop, although they should have been put in in May to guard against dry weather in starting plants.

HERMON L. KENT,
Experimenter.

WESTFIELD, N. Y., *November 8*, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 157 days; making 22 3-7 weeks; that the whole amount of rainfall in the whole time upon the beets was 14.92; that the average rainfall per month was 2.85; that the average rainfall per week was .665; and that the average rainfall per day was .095; that the number of days on which the sun shone was 31; that the number of cloudy days was 87; that the number of days on which it rained was 40; the kind of soil on which this patch of beets was raised was loose and mellow; the amount of beets raised upon the patch would indicate that that soil would raise 13.60 tons of Klein Wanzlebener per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 13.70 per cent. of sugar. This would indicate that that soil would raise beets that would produce 3726.40 pounds of sugar per acre from the Klein Wanzlebener, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 4.

REPORT FOR WEEK ENDING MAY 29, 1897.

May 27.—Sowed beet seed; shower after seed was sowed.

General remarks.—The field selected for sowing one acre to sugar beets is a part of a steep hill, facing the north. The soil, a clay loam, somewhat stony. It had been mowed for five years previous to last year, when it received twenty loads of barnyard manure to the acre, then plowed and planted to potatoes. It produced about two hundred bushels to the acre. This year the ground was plowed with a three-horse team, ten inches deep; followed in the furrow with a sub-soil plow, drawn by two horses, which stirred up the ground from five to seven inches deeper, making the depth plowed from fifteen to seventeen inches, two men and two teams working from 7 a. m. to 6.30 p. m. May 20th, was at Albany receiving instruction from the Commissioner and Prof. Jordan in regard to sowing the seed and cultivation of the sugar beets. May 21st, rained in morning, ground too wet to work. Ordered special fertilizer. May 22d, Monday, ground too wet to work; in afternoon, from 12.30 to 7 o'clock, one man and team went over the ground twice with a wheel-harrow and once with a harrow-roller, leaving the ground in fine condition for planting. Shower at night. May 23d, hard rain in morning. May 24th, rain in morning, ground very wet. May 25th, ground too wet to go onto it. May 26th, in afternoon, sowed on the acre 1,000 pounds of a special fertilizer, bought of Halstead & Pierson, Chatham, N. Y., prepared as directed by Prof. Jordan; sowed it with the fertilizer attachment of grain drill, going over the ground twice, sowing five hundred pounds each time, one man and team working four hours. May 27th, went over the ground with a roller, man and team working two hours; commenced sowing the beet seed at 7 a. m., with a Planet, Jr., hand seed drill; the first half-acre was put in drills twenty inches apart; sowed seven pounds Klein Wanzlebener seed; one row of potatoes was then planted to separate the beets. The next half-acre was sowed in drills twenty-four inches apart, using seven and one-fourth pounds of Vilmorin Improved beet seed, making one full acre, by survey, sowed with beet seed, exclusive of the row of potatoes; man finished sowing the seed at 4 p. m.; commenced raining just as he finished drilling in the seed; had a hard shower. Time of man sowing seed, three-fourths day.

REPORT FOR WEEK ENDING JUNE 5, 1897.

May 30.—Cloudy forenoon; clear afternoon.

May 31.—Cloudy through the day.

June 1.—Cloudy and windy.

June 2.—6 a. m., 36° F. Noon, 65° F. 6 p. m., 50° F.; clear and cold.

June 3.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 68° F.; hard shower in evening; clear forenoon; cloudy afternoon; rains in evening; beets began sprouting through the ground.

June 4.—6 a. m., 65° F. Noon, 80° F. 6 p. m., 70° F.; hard shower; clearing and showery.

June 5.—6 a. m., 52° F. Noon, 72° F. 6 p. m., 66° F.; clear.

General remarks.—Thursday, June 3d, the first of the beet sprouts showed above the ground.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 58° F. Noon, 71° F.; clear forenoon. 6 p. m., 68° F.; cloudy afternoon.

June 7.—6 a. m., 52° F. Noon, 60° F. 6 p. m., 56° F.; cloudy.

June 8.—6 a. m., 50° F. Noon, 64° F. 6 p. m., 58° F.; cloudy.

June 9.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 58° F.; rainfall, 2 in.; rain all day.

June 10.—6 a. m., 52° F. Noon, 64° F.; rainfall, .12 in.; rain forenoon. 6 p. m., 60° F.; clear afternoon.

June 11.—6 a. m., 56° F. Noon, 74° F. 6 p. m., 72° F.; clear.

June 12.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 68° F.; clear; beets large enough to cultivate.

General remarks.—Beets have come up uneven; to-day, the 12th, some of the beet leaves are one and one-half inches long, while others are just coming thorugh the ground, and occasionally spaces two to three feet where none of the seed has sprouted, but generally they have come up very thick; will transplant and fill in the vacant spaces; the rows are now plainly seen; started the hand cultivator to-day, but found the ground too wet to work well; so only cultivated two rows.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 66° F.; rainfall, .10 in.; clear morning; shower afternoon; clear evening.

June 14.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, .11 in.; clear morning; shower afternoon; cold and wet.

June 15.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, .21 in.; frequent showers.

June 16.—6 a. m., 50° F. Noon, 74° F. 6 p. m., 66° F.; clear.

June 17.—6 a. m., 54° F. Noon, 72° F. 6 p. m., 68° F.; clear.

June 18.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 70° F.; clear.

June 19.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 72° F.; clear forenoon; cloudy afternoon; from one inch to four inches length of leaf; beets now making good growth.

General remarks.—On account of delay in cultivating, occasioned by wet weather, the weeds got such a start of the beets that I found it necessary to have them hoed by hand before they could be cultivated. June 14, one-half day man hoeing; June 15, one day man hoeing; June 17, one day man hoeing; June 18, one day man hoeing; June 19, one-half day man and horse cultivating.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 58° F. Noon, 69° F. 6 p. m., 62° F.; rainfall, .17 in.; rain forenoon; clear afternoon.

June 21.—6 a. m., 44° F. Noon, 66° F. 6 p. m., 62° F.; clear.

June 22.—6 a. m., 44° F. Noon, 72° F. 6 p. m., 65° F.; clear.

June 23.—6 a. m., 58° F. Noon, 80° F. 6 p. m., 75° F.; clear.

June 24.—6 a. m., 66° F. Noon, 84° F. 6 p. m., 80° F.; clear.

June 25.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 74° F.; clear.

June 26.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 64° F.; clear.

General remarks.—June 26, one-half day, man and horse, cultivating; June 26, one day, man with hand cultivator.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 46° F. Noon, 70° F. 6 p. m., 65° F.; clear.

June 28.—6 a. m., 48° F. Noon, 70° F. 6 p. m., 62° F.; clear.

June 29.—6 a. m., 60° F. Noon, 77° F. 6 p. m., 62° F.; rainfall, 1 in.; cloudy forenoon; rain afternoon.

June 30.—6 a. m., 66° F. Noon, 78° F. 6 p. m., 72° F.; clear.

July 1.—6 a. m., 62° F. Noon, 82° F. 6 p. m., 76° F.; clear.

July 2.—6 a. m., 64° F. Noon, 86° F. 6 p. m., 78° F.; cloudy forenoon; clear afternoon.

July 3.—6 a. m., 60° F. Noon, 86° F. 6 p. m., 78° F.; clear.

General remarks.—July 3, one-half day, man and horse, cultivating.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 80° F.; clear.

July 5.—6 a. m., 72° F. Noon, 90° F. 6 p. m., 86° F.; clear.

July 6.—6 a. m., 74° F. Noon, 91° F. 6 p. m., 76° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

July 7.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 74° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

July 8.—6 a. m., 66° F. Noon, 82° F. 6 p. m., 80° F.; clear.

July 9.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 86° F.; clear.

July 10.—6 a. m., 73° F. Noon, 90° F. 6 p. m., 84° F.; clear.

General remarks.—June 8, one day, man thinning beets, $1; June 10, one-half day, man and horse, cultivating, 75 cents.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

July 12.—6 a. m., 69° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .45 in.; cloudy forenoon; rain afternoon.

July 13.—6 a. m., 69° F. Noon, 73° F. 6 p. m., 70° F.; rainfall, .98 in.; rain.

July 14.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 68° F.; rainfall, 3.45 in.

July 15.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 65° F.; rainfall, .41 in.; showers.

July 16.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 75° F.; clear.

July 17.—6 a. m., 66° F. Noon, 82° F. 6 p. m., 70° F.; rainfall, .26 in.; shower.

General remarks.—July 15, two men ten hours each weeding and thinning out beets; July 16, two men ten hours each weeding and thinning out beets; July 17, two men ten hours each weeding and thinning out beets.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 68° F.; cloudy.

July 19.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 74° F.; cloudy.

July 20.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 78° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

July 21.—6 a. m., 78° F. Noon, 78° F. 6 p. m., 74° F.; rainfall, .14 in.; clear forenoon; shower afternoon.

July 22.—6 a. m., 71° F. Noon, 76° F. 6 p. m., 75° F.; rainfall, .20 in.; showery.

July 23.—6 a. m., 70° F. Noon, 86° F. 6 p. m., 70° F.; rainfall, .12 in.; clear forenoon; shower afternoon.

July 24.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 65° F.; rainfall, .08 in.; clear forenoon; shower afternoon.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 70° F.; rainfall, .03 in.; clear forenoon; shower afternoon.

July 26.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 66° F.; rainfall, .01 in.; cloudy; shower.

July 27.—6 a. m., 58° F. Noon, 64° F. 6 p. m., 64° F.; rainfall, .05 in.; cloudy; shower.

July 28.—6 a. m., 56° F. Noon, 63° F. 6 p. m., 61° F.; rainfall, .94 in.; cloudy forenoon; rain afternoon.

July 29.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, 1.78 in.; rainy.

July 30.—6 a. m., 62° F. Noon, 73° F. 6 p. m., 70° F.; rainfall, .05 in.; shower and cloudy; clear afternoon.

July 31.—6 a. m., 65° F. Noon, 82° F. 6 p. m., 68° F.; clear.

General remarks.—July 26, one-half day man and horse cultivating; July 30, one day man pulling out weeds.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 68° F.; clear.

August 2.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 74° F.; clear.

August 3.—6 a. m., 60° F. Noon, 82° F. 6 p. m., 80° F.; clear.

August 4.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 72° F.; clear.

August 5.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 68° F.; rainfall, .44 in.; rain forenoon; clear afternoon.

August 6.—6 a. m., 50° F. Noon, 77° F. 6 p. m., 65° F.; clear forenoon; shower afternoon.

August 7.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 65° F.; rainfall, .31 in.; cloudy and slight shower; clear afternoon.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 70° F.; clear.

August 9.—6 a. m., 60° F. Noon, 73° F. 6 p. m., 62° F.; clear.

August 10.—6 a. m., 62° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

August 11.—Rainfall, .89 in.; showery.

August 12.—Rainfall, .16 in.; clear forenoon; shower afternoon.

August 13.—Clear.

August 14.—Clear.

General remarks.—August 13, one day, man pulling weeds out of beets; August 14, one day, man pulling weeds out of beets.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 70° F. Noon, 80° F. 6 p. m., 68° F.; rainfall, .68 in.; cloudy forenoon; shower afternoon.

August 16.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .07 in.; clear forenoon; shower afternoon.

August 17.—6 a. m., 58° F. Noon, 70° F. 6 p. m., 64° F.; clear.

August 18.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 70° F.; clear.

August 19.—6 a. m., 60° F. Noon, 71° F. 6 p. m., 68° F.; clear.

August 20.—6 a. m., 56° F. Noon, 66° F. 6 p. m., 60° F.; rainfall, .10 in.; clear; shower afternoon.

August 21.—6 a. m., 46° F. Noon, 74° F. 6 p. m., 68° F.; clear.

General remarks.—August 19, one-half day, man weeding beets; August 20, one-half day, man weeding beets.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .09 in.; clear forenoon; shower afternoon.

August 23.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 66° F.; clear.

August 24.—6 a. m., 59° F. Noon, 66° F. 6 p. m., 65° F.; rainfall, .97 in.; showery.

August 25.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .05 in.; clear forenoon; shower afternoon.

August 26.—6 a. m., 53° F. Noon, 70° F. 6 p. m., 66° F.; clear.

August 27.—6 a. m., 46° F. Noon, 78° F. 6 p. m., 70° F.; clear.

August 28.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 68° F.; clear.

General remarks.—August 24, two men all day pulling weeds out of beets, $1 each; August 25, two men all day pulling weeds out of beets, $1 each.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 70° F.: clear.

August 30.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 60° F.; clear.

August 31.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 66° F.; clear.

September 1.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 66° F.; clear.

September 2.—6 a. m., 58° F. Noon, 66° F. 6 p. m., 64° F.; rainfall, .78 in.: rain forenoon; clear afternoon.

September 3.—6 a. m., 44° F. Noon, 65° F. 6 p. m., 58° F.; clear

September 4.—6 a. m., 46° F. Noon, 70° F. 6 p. m., 64° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 53° F. Noon, 76° F. 6 p. m., 65° F.; clear.

September 6.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 72° F.; clear.

September 7.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 65° F.; rainfall, .03 in.; clear forenoon; shower afternoon.

September 8.—6 a. m., 60° F. Noon, 75° F. 6 p. m., 64° F.; clear.

September 9.—6 a. m., 63° F. Noon, 78° F. 6 p. m., 65° F.; clear.

September 10.—6 a. m., 63° F. Noon, 92° F. 6 p. m., 75° F.; clear.

September 11.—6 a. m., 65° F. Noon, 88° F. 6 p. m., 58° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 42° F. Noon, 72° F. 6 p. m., 68° F.; clear forenoon; cloudy afternoon.

September 13.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 72° F.; clear.

September 14.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 62° F.; clear.

September 15.—6 a. m., 42° F. Noon, 67° F. 6 p. m., 55° F.; clear.

September 16.—6 a. m., 42° F. Noon, 76° F. 6 p. m., 72° F.; clear.

September 17.—6 a. m., 58° F. Noon, 72° F. 6 p. m., 60° F.; rainfall, .15 in.; rain forenoon; clear afternoon.

September 18.—6 a. m., 37° F. Noon, 62° F. 6 p. m., 50° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 66° F.; clear.

September 20.—6 a. m., 50° F. Noon, 56° F. 6 p. m., 50° F.; rainfall, .25 in.; clear forenoon; rain afternoon.

September 21.—6 a. m., 40° F. Noon, 54° F. 6 p. m., 46° F.; rainfall, .06 in.; slight rain forenoon; clear afternoon.

September 22.—6 a. m., 33° F. Noon, 62° F. 6 p. m., 65° F.; clear.

September 23.—6 a. m., 50° F. Noon, 61° F. 6 p. m., 58° F.; rainfall, .13 in.; cloudy forenoon; rain afternoon.

September 24.—6 a. m., 54° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, .06 in.; cloudy forenoon; rain afternoon.

September 25.—6 a. m., 54° F. Noon, 74° F. 6 p. m., 60° F.; clear.

General remarks.—Some of the lower leaves of the beets are turning brown, showing that they are ripening.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 46° F. Noon, 76° F. 6 p. m., 64° F.; rainfall, .05 in.; clear forenoon; shower afternoon.

September 27.—6 a. m., 42° F. Noon, 52° F. 6 p. m., 48° F.; clear.

September 28.—6 a. m., 30° F. Noon, 60° F. 6 p. m., 48° F.; clear.

September 29.—6 a. m., 40° F. Noon, 68° F. 6 p. m., 50° F.; clear.

September 30.—6 a. m., 38° F. Noon, 74° F. 6 p. m., 60° F.; clear.

October 1.—6 a. m., 48° F. Noon, 84° F. 6 p. m., 74° F.; clear.

October 2.—6 a. m., 48° F. Noon, 66° F. 6 p. m., 52° F.; rainfall, .02 in.; high wind and shower forenoon; clear afternoon.

General remarks.—Beets ripening slowly; a few of the lower leaves are dying; no new growth of leaves; the beets still growing. I think they will be ripe enough to harvest in a few days.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 30° F. Noon, 62° F. 6 p. m., 48° F.; clear.

October 4.—6 a. m., 30° F. Noon, 72° F. 6 p. m., 50° F.; clear.

October 5.—6 a. m., 34° F. Noon, 70° F. 6 p. m., 50° F.; clear.

October 6.—6 a. m., 54° F. Noon. 60° F. 6 p. m., 50° F.; clear.

October 7.—6 a. m., 45° F. Noon, 55° F. 6 p. m., 50° F.; rainfall, .03 in.; shower forenoon; clear afternoon.

October 8.—6 a. m., 36° F. Noon, 58° F. 6 p. m., 52° F.; clear.

October 9.—6 a. m., 50° F. Noon, 58° F. 6 p. m., 47° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 25° F. Noon, 58° F. 6 p. m., 45° F.; clear.

October 11.—6 a. m., 48° F. Noon, 64° F. 6 p. m., 60° F.; clear.

October 12.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 64° F.; rainfall, .74 in.; rain all day.

October 13.—6 a. m., 42° F. Noon, 67° F. 6 p. m., 52° F.; clear.

October 14.—6 a. m., 36° F. Noon, 65° F. 6 p. m., 60° F.; clear.

October 15.—6 a. m., 50° F. Noon, 84° F. 6 p. m., 65° F.; clear.

October 16.—6 a. m., 60° F. Noon, 86° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 40° F. Noon, 54° F. 6 p. m., 46° F.; clear.

October 18.—6 a. m., 26° F. Noon, 60° F. 6 p. m., 42° F.; clear.

October 19.—6 a. m., 34° F. Noon, 60° F. 6 p. m., 40° F.; clear.

October 20.—6 a. m., 40° F. Noon, 59° F. 6 p. m., 50° F.; clear.

General remarks.—October 19th commenced harvesting the beets; plowed a deep furrow close to the beets, then pulled them out by their tops and threw them in piles; then plowed two deep furrows between each row; the beets were then picked out very easily. Three men and one team of horses worked two days in getting the one acre of beets out of the ground and in piles; two men worked five days cutting tops off the beets and drawing and storing them in cellar. The Klein Wanzlebener beet yielded at the rate of eighteen tons to the acre. The Vilmorin Improved beet yielded at the rate of twelve tons to the acre.

HENRY S. AMBLER,
Experimenter.

CHATHAM, N. Y., *October* 23, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 154 days; making 22 weeks; that the whole amount of rainfall in the whole time upon the beets was 20.12; that the average rainfall per month was 3.9; that the average rainfall per week was .91; and that the average rainfall per day was .13; that the number of days on which the sun shone was 91; that the number of cloudy days was 13; that the number of days on which it rained was 50; the kind of soil on which this patch of beets was raised was clay loam, somewhat stony; the amount of beets raised upon the patch would indicate that that soil would raise 18 tons of Klein Wanzlebener per acre and 12 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 15.18 percentage of sugar and the Vilmorin Improved 15.72 percentage of sugar. This would indicate that that soil would raise beets that would produce 5464.80 pounds of sugar per acre from the Klein Wanzlebener and 3772.80 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 5.

REPORT FOR WEEK ENDING JUNE 5, 1897.

June 3.—Noon, 74° F.; cloudy. Planted beets June 3d; the land was plowed last fall, manured in winter and plowed again this spring. I sowed broadcast eight hundred pounds of Wheeler fertilizers, then well harrowed; the rows are eighteen inches apart; the soil is of sandy loam, free of stone.

June 4.—A very little rain; partly cloudy.

June 5.—Clear.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—Clear; plowing, harrowing and smoothing, $1.75.

June 7.—Cloudy.

June 8.—Cloudy.

June 9.—6 a. m., 48° F. Noon, 60° F. 6 p. m., 56° F.; rainfall, .75 in.; cloudy.

June 10.—6 a. m., 48° F. Noon, 64° F. 6 p. m., 58° F.; rainfall, .06 in.; cloudy.

June 11.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 78° F.; clear.

June 12.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 70° F.; clear; beets just pricking through.

General remarks.—Rain gauge not received for use until the 9th; rained all day of 8th.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 72° F.; rainfall, .03 in.; forenoon clear, afternoon cloudy.

June 14.—6 a. m., 52° F. Noon, 72° F. 6 p. m., 72° F.; clear.

June 15.—6 a. m., 52° F. Noon, 78° F. 6 p. m., 74° F.; clear.

June 16.—6 a. m., 54° F. Noon, 78° F. 6 p. m., 66° F.; cloudy.

June 17.—6 a. m., 46° F. Noon, 62° F. 6 p. m., 60° F.; forenoon clear, afternoon cloudy.

June 18.—6 a. m., 50° F. Noon, 66° F. 6 p. m., 60° F.; cloudy; rainfall, .05 in.; the surface of the ground is getting very dry.

June 19.—6 a. m., 50° F. Noon, 80° F. 6 p. m., 72° F.; forenoon clear, afternoon cloudy; beets about one inch high.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 62° F. Noon, 66° F. 6 p. m., 56° F.; rainfall, .20 in.; cloudy.

June 21.—6 a. m., 42° F. Noon, 62° F. 6 p. m., 66° F.; clear.

June 22.—6 a. m., 42° F. Noon, 72° F. 6 p. m., 74° F.; clear.

June 23.—6 a. m., 56° F. Noon, 80° F. 6 p. m., 80° F.; forenoon clear, afternoon cloudy.

June 24.—6 a. m., 68° F. Noon, 86° F. 6 p. m., 72° F.; rainfall, .35 in.; cloudy.

June 25.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 68° F.; rainfall, .15 in.; forenoon cloudy, afternoon clear.

June 26.—6 a. m., 56° F. Noon, 64° F. 6 p. m., 62° F.; clear.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 79° F.; clear.

June 28.—6 a. m., 42° F. Noon, 74° F. 6 p. m., 62° F.; clear.

June 29.—6 a. m., 54° F. Noon, 76° F. 6 p. m., 64° F.; rainfall, .26 in.; cloudy.

June 30.—6 a. m., 68° F. Noon, 68° F. 6 p. m., 72° F.; rainfall, 1 in.; cloudy.

July 1.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 84° F.; forenoon cloudy, afternoon cloudy.

July 2.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 80° F.; clear.

July 3.—6 a. m., 60° F. Noon, 88° F. 6 p. m., 90° F.; clear.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 76° F. Noon, 88° F. 6 p. m., 86° F.; clear.

July 5.—6 a. m., 72° F. Noon, 94° F. 6 p. m., 92° F.; clear.

July 6.—6 a. m., 72° F. Noon, 89° F. 6 p. m., 80° F.; clear.

July 7.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 92° F.; clear.

July 8.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 92° F.; clear.

July 9.—6 a. m., 66° F. Noon, 92° F. 6 p. m., 98° F.; clear.

July 10.—6 a. m., 68° F. Noon, 94° F. 6 p. m., 94° F.; clear.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 82° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

July 12.—6 a. m., 68° F. Noon, 70° F. 6 p. m., 64° F.; rainfall, .70 in.; cloudy.

July 13.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 78° F.; forenoon cloudy, afternoon clear.

July 14.—6 a. m., 62° F. Noon, 82° F. 6 p. m., 80° F.; rainfall, .13 in.; cloudy.

July 15.—6 a. m., 56° F. Noon, 80° F. 6 p. m., 76° F.; forenoon cloudy, afternoon clear.

July 16.—6 a. m., 56° F. Noon, 82° F. 6 p. m., 82° F.; clear.

July 17.—6 a. m., 69° F. Noon, 80° F. 6 p. m., 80° F.; rainfall, .19 in.; cloudy.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 80° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

July 19.—6 a. m., 66° F. Noon, 84° F. 6 p. m., 80° F.; cloudy.

July 20.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 70° F.; forenoon clear, afternoon cloudy.

July 21.—6 a. m., 64° F. Noon, 82° F. 6 p. m., 80° F.; forenoon clear, afternoon hazy.

July 22.—6 a. m., 70° F. Noon, 84° F.; rainfall, .31 in. 6 p. m., 86° F.; forenoon cloudy, afternoon clear.

July 23.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, .48 in.; cloudy.

July 24.—6 a. m., 64° F. Noon, 73° F. 6 p. m., 80° F.; rainfall, .71 in.; cloudy.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 68° F. Noon, 78° F.; rainfall, .21 in. 6 p. m., 80° F.; cloudy.

July 26.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 66° F.; cloudy.

July 27.—6 a. m., 58° F. Noon, 66° F. 6 p. m., 60° F.; rainfall, .70 in.; cloudy.

July 28.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 60° F.; rainfall, .20 in.; cloudy.

July 29.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, .07 in.; cloudy.

July 30.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 74° F.; rainfall, .06 in.; cloudy.

July 31.—6 a. m., 62° F. Noon, 78° F. 6 p. m.. 80° F.; clear.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 76° F.; clear.

August 2.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 80° F.; clear.

August 3.—6 a. m., 68° F. Noon, 86° F. 6 p. m., 89° F.; clear.

August 4.—6 a. m., 66° F. Noon, 90° F. 6 p. m., 80° F.; forenoon clear, afternoon cloudy.

August 5.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 72° F.; clear.

August 6.—6 a. m., 50° F. Noon, 78° F. 6 p. m., 66° F.; clear.

August 7.—6 a. m., 50° F. Noon, 86° F. 6 p. m., 80° F.; clear.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 64° F. Noon, 80° F. 6 p. m., 78° F.; clear.

August 9.—6 a. m., 64° F. Noon, 84° F. 6 p. m., 74° F.; clear.

August 10.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .14 in.; forenoon clear, afternoon cloudy.

August 11.—6 a. m., 66° F. Noon, 76° F. 6 p. m., 68° F.; cloudy.

August 12.—6 a. m., 56° F. Noon, 72° F. 6 p. m., 64° F.; rainfall, .20 in.; cloudy.

August 13.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 72° F.; cloudy.

August 14.—6 a. m., 50° F. Noon, 84° F. 6 p. m., 82° F.; clear.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 74° F. Noon, 76° F. 6 p. m., 74° F.; cloudy.

August 16.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 72° F.; rainfall, .31 in.; cloudy.

August 17.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 62° F.; rainfall, .14 in.; cloudy.

August 18.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 68° F.; forenoon cloudy, afternoon clear.

August 19.—6 a. m., 52° F. Noon, 74° F. 6 p. m., 68° F.; forenoon clear, afternoon cloudy.

August 20.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 68° F.; clear.

August 21.—6 a. m., 46° F. Noon, 76° F. 6 p. m., 74° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 64° F. Noon, 84° F. 6 p. m., 78° F.; clear.

August 23.—6 a. m., 64° F. Noon, 70° F.; rainfall, .29 in. 6 p. m., 66° F.; cloudy.

August 24.—6 a. m., 62° F. Noon, 68° F. 6 p. m., 76° F.; rainfall, .15 in.; cloudy.

August 25.—6 a. m., 62° F. Noon, 74° F. 6 p. m., 66° F.; cloudy.

August 26.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 70° F.; clear.

August 27.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

August 28.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 69° F. Noon, 89° F. 6 p. m., 80° F.; clear.

August 30.—6 a. m., 66° F. Noon, 76° F. 6 p. m., 60° F.; rainfall, .12 in.; clear.

August 31.—6 a. m., 46° F. Noon, 80° F. 6 p. m., 74° F.; cloudy.

September 1.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .53 in.; cloudy.

September 2.—6 a. m., 62° F. Noon, 76° F. 6 p. m., 74° F.; clear.

September 3.—6 a. m., 46° F. Noon, 72° F. 6 p. m., 66° F.; clear.

September 4.—6 a. m., 46° F. Noon, 80° F. 6 p. m., 76° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 50° F. Noon, 84° F. 6 p. m., 80° F.; clear; it is very dry and the tops of the beets are turning yellow.

September 6.—6 a. m., 56° F. Noon, 90° F. 6 p. m., 80° F.; clear.

September 7.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 76° F.; clear.

September 8.—6 a. m., 64° F. Noon, 88° F. 6 p. m., 89° F.; clear.

September 9.—6 a. m., 56° F. Noon, 94° F. 6 p. m., 80° F.; clear.

September 10.—6 a. m., 60° F. Noon, 98° F. 6 p. m., 80° F.; clear.

September 11.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 48° F. Noon, 72° F. 6 p. m., 64° F.; clear.

September 13.—6 a. m., 64° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .10 in.; cloudy.

September 14.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .25 in.; cloudy.

September 15.—6 a. m., 44° F. Noon, 80° F. 6 p. m., 66° F.; cloudy.

September 16.—6 a. m., 50° F. Noon, 88° F. 6 p. m., 76° F.; clear.

September 17.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 56° F.; rainfall, .40 in.; cloudy.

September 18.—6 a. m., 38° F. Noon, 72° F. 6 p. m., 60° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 60° F. Noon, 62° F. 6 p. m., 58° F.; clear.
September 20.—6 a. m., 50° F. Noon, 50° F. 6 p. m., 46° F.; clear.
September 21.—6 a. m., 40° F. Noon, 62° F. 6 p. m., 68° F.; rainfall, .20 in.; cloudy.
September 22.—6 a. m., 36° F. Noon, 70° F. 6 p. m., 60° F.; clear.
September 23.—6 a. m., 60° F. Noon, 60° F. 6 p. m., 50° F.; rainfall, .15 in.; cloudy.
September 24.—6 a. m., 52° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, 1.65 in.; cloudy.
September 25.—6 a. m., 40° F. Noon, 84° F. 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 74° F.; rainfall, .18 in.; cloudy.
September 27.—6 a. m., 46° F. Noon, 64° F. 6 p. m., 50° F.; clear.
September 28.—6 a. m., 82° F. Noon, 66° F. 6 p. m., 54° F.; clear.
September 29.—6 a. m., 50° F. Noon, 86° F. 6 p. m., 76° F.; clear.
September 30.—6 a. m., 42° F. Noon, 78° F. 6 p. m., 70° F.; clear.
October 1.—6 a. m., 46° F. Noon, 98° F. 6 p. m., 70° F.; clear.
October 2.—6 a. m., 59° F. Noon, 62° F. 6 p. m., 50° F.; clear.

General remarks.—Referring to yours of the 30th ult., relative to condition, etc., of the beets, would say, both pieces indicate ripeness, the lower leaves dying to some extent. The Klein Wanzlebener, however, are further along in ripeness than the Vilmorin Improved, and I should think the former would do to harvest the latter part of this present week or the first of next week. The Vilmorin Improved would not be ready to harvest for a week or so after the others. Both patches show the beginning of its growth of new leaves.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 82° F. Noon, 94° F. 6 p. m., 46° F.; clear.
October 4.—6 a. m., 32° F. Noon, 96° F. 6 p. m., 58° F.; clear.
October 5.—6 a. m., 34° F. Noon, 88° F. 6 p. m., 76° F.; clear.
October 6.—6 a. m., 56° F. Noon, 68° F. 6 p. m., 62° F.; rainfall, .10 in.; cloudy.
October 7.—6 a. m., 48° F. Noon, 50° F. 6 p. m., 44° F.; clear.
October 8.—6 a. m., 30° F. Noon, 58° F. 6 p. m., 59° F.; cloudy.
October 9.—6 a. m., 50° F. Noon, 62° F. 6 p. m., 54° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 30° F. Noon, 68° F. 6 p. m., 50° F.; clear.
October 11.—6 a. m., 54° F. Noon, 66° F. 6 p. m., 54° F.; cloudy.
October 12.—6 a. m., 68° F. Noon, 68° F. 6 p. m., 64° F.; rainfall, .45 in.; cloudy.
October 13.—6 a. m., 40° F. Noon, 66° F. 6 p. m., 52° F.; clear.
October 14.—6 a. m., 44° F. Noon, 86° F. 6 p. m., 70° F.; clear.
October 15.—6 a. m., 58° F. Noon, 90° F. 6 p. m., 82° F.; cloudy.
October 16.—6 a. m., 64° F. Noon, 88° F. 6 p. m., 80 °F.; clear.

General remarks.—The one hundred pounds of Vilmorin Improved shrunk to eighty-eight and one-half pounds, and the Klein Wanzlebener shrunk to eighty-one and one-half pounds; the former weighed nine thousand one hundred and thirty pounds and the latter weighed four thousand four hundred and thirty pounds. One reason why the former weighed more than the latter was because it was a larger piece of ground, but they seemed to have grown better and larger, when I came to harvest them. There is no doubt but beets can be grown in Cortland county, but they must be sowed earlier than the 3d of June. About the 15th of May is the time to sow them here. The beets had to be drawn one-half mile to be weighed.

L. D. TAYLOR,
Experimenter.

CORTLAND, N. Y., *October* 18, 1897.

An examination of the above shows that from the time of planting the seeds to the harvesting of the beets was 147 days; making 21 weeks; that the whole amount of rainfall in the whole time upon the beets was 12.53; that the average rainfall per month was 2.55; that the average rainfall per week was .637; and that the average rainfall per day was .085; that the number of days on which the sun shone was 77; that the number of cloudy days was 29; that the number of days on which it rained was 41; the kind of soil on which this patch of beets was raised was sandy loam, free of stone; the amount of beets raised upon the patch would indicate that that soil would raise 8.86 tons of Klein Wanzlebener per acre, and 18.26 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 12.74 percentage of sugar and the Vilmorin Improved 14.14 percentage of sugar. This would indicate that that soil would raise beets that would produce 3083.28 lbs. of sugar per acre from the Klein Wanzlebener and 5163.93 lbs. of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 6.

REPORT FOR WEEK ENDING JUNE 12, 1897.

General remarks.—Beet seed received June 4th; phosphate not received until June 5th; rain June 7th, 8th, 9th; total fall, 1.55 inch; beets planted June 11th. Expenses: Plowing, drilling and planting, $2.75; freight on phosphate, 90 cents.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 68° F. Noon, 82° F 6 p. m., 76° F.; sunshine.

June 14.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 72° F.; sunshine.

June 15.—6 a. m., 70° F. Noon, 74° F. 6 p. m., 76° F.; sunshine.

June 16.—6 a. m., 62° F.; sunshine. Noon, 72° F. 6 p. m., 60° F.; cloudy.

June 17.—6 a. m., 61° F. Noon, 74° F. 6 p. m., 62° F.; cloudy.

June 18.—6 a. m., 67° F. Noon, 75° F. 6 p. m., 70° F.; sunshine.

June 19.—6 a. m., 70° F.; sunshine. Noon, 81° F.; partly cloudy. 6 p. m., 60° F.; cloudy.

General remarks.—The week has been dry and cool.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 60° F.; cloudy Noon, 62° F. 6 p. m., 60° F.; clear.

June 21.—6 a. m., 51° F. Noon, 62° F. 6 p. m., 61° F.; clear; continued drought prevents any rapid growth.

June 22.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 78° F.; clear.

June 23.—6 a. m., 68° F.; clear. Noon, 88° F.; part cloudy. 6 p. m., 82° F.; clear.

June 24.—6 a. m., 74° F. Noon, 90° F.; clear. 6 p. m., 74° F.; part cloudy.

June 25.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 72° F.; clear.

June 26.—6 a. m., 56° F. Noon, 68° F. 6 p. m., 64° F.; clear.

General remarks.—Beets came up very even, and have been weeded once. We need rain very badly to get best results, having had none since the beets were planted; the land is very dry.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 68° F. Noon, 74° F. 6 p. m., 70° F.; clear.

June 28.—6 a. m., 56° F. Noon, 78° F.; clear. 6 p. m., 72° F.; part cloudy.

June 29.—6 a. m., 69° F. Noon, 78° F.; rainfall, .45 in.; part cloudy. 6 p. m., 66° F.; clear.

June 30.—6 a. m., 66° F.; cloudy. Noon, 74° F.; part cloudy. 6 p. m., 70° F.; clear.

July 1.—6 a. m., 64° F.; part cloudy. Noon, 92° F.; clear. 6 p. m., 78° F.; cloudy.

July 2.—6 a. m., 66° F. Noon, 82° F.; clear. 6 p. m., 80° F.; part cloudy.

July 3.—6 a. m., 78° F. Noon, 90° F. 6 p. m., 82° F.; clear.

REPORT FOR WEEK ENDING JULY 10, 1897

July 4.—6 a. m., 92° F. Noon, 104° F. 6 p. m., 98° F.; clear.

July 5.—6 a. m., 86° F. Noon, 104° F. 6 p. m., 96° F.; clear.

July 6.—6 a. m., 76° F.; part cloudy. Noon, 98° F. 6 p. m., 88° F.; clear.

July 7.—6 a. m., 76° F. Noon, 92° F. 6 p. m., 74° F.; clear.

July 8.—6 a. m., 72° F. Noon, 100° F. 6 p. m., 96° F.; clear.

July 9.—6 a. m., 80° F. Noon, 100° F. 6 p. m., 94° F.; clear.

July 10.—6 a. m., 74° F. Noon, 104° F. 6 p. m., 92° F.; clear.

General remarks.—For ten days beets have been making no progress; the continued drought and hot winds are burning up all vegetation; while there are showers around us, we have had only .45 of one inch of rainfall since planting.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 82° F.; clear. Noon, 98° F.; cloudy. 6 p. m., 88° F.; rainfall, 1.40 in.; rain.

July 12.—6 a. m., 66° F.; cloudy. Noon, 70° F.; part cloudy. 6 p. m., 72° F.; clear.

July 13.—6 a. m., 66° F.; cloudy. Noon, 80° F. 6 p. m., 74° F.; clear.

July 14.—6 a. m., 64° F.; cloudy. Noon, 78° F.; clear. 6 p. m., 72° F.; part cloudy.

July 15.—6 a. m., 78° F. Noon, 84° F. 6 p. m., 72° F.; clear.

July 16.—6 a. m., 62° F.; clear. Noon, 90° F. 6 p. m., 78° F.; cloudy.

July 17.—6 a. m., 62° F. Noon, 84° F. 6 p. m., 80° F.; clear.

General remarks.—July 13th, seven days, weeding, at 60 cents, $4.20; July 13th, one day, weeding, $1.25; July 15th, two days, transplanting and weeding, at 50 cents, $1; July 16th, two days, transplanting and weeding, at 50 cents, $1; July 17th, one day, transplanting and weeding, 50 cents; total expense for week, $7.75. The crop received great benefit from the rain of July 11th.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 76° F. Noon, 80° F.; clear. 6 p. m., 68° F.; cloudy.

July 19.—6 a. m., 80° F. Noon, 90° F. 6 p. m., 82° F.; cloudy.

July 20.—6 a. m., 68° F.; cloudy. Noon, 82° F. 6 p. m., 80° F.; clear.

July 21.—6 a. m., 74° F. Noon, 90° F. 6 p. m., 86° F.; clear.

July 22.—6 a. m., 72° F.; cloudy. Noon, 90° F. 6 p. m., 88° F.; rainfall, .25 in.; clear.

July 23.—6 a. m., 80° F.; cloudy. Noon, 72° F.; partly cloudy. 6 p. m., 68° F.; rainfall, .20 in.; clear.

July 24.—6 a. m., 68° F.; cloudy. Noon, 80° F.; clear. 6 p. m., 76° F.; rainfall, .30 in.; cloudy.

General remarks.—To hand hoeing and weeding, four days at 60 cents per day, $2.40; one day, $1.25; total, $3.65.

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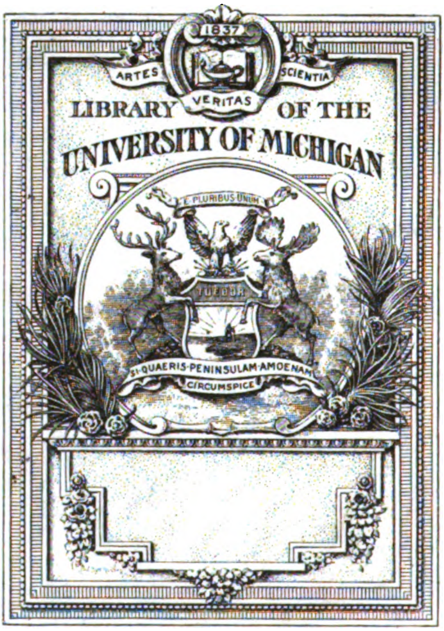

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COMPLIMENTS OF
CHARLES R. PARIS,
Member of Assembly,
—1899,—

dup -

STATE OF NEW YORK.

DEPARTMENT OF AGRICULTURE.

The Report of the Commissioner of Agriculture, for 1897, consists of three volumes, as follows:

Volume I. Fifth Annual Report of the regular work of the Department of Agriculture, as required by section 5 of chapter 338 of the Laws of 1893.

Volume II. Ninth Annual Report of the State Weather Bureau, and Tenth Annual Report of the Cornell University Agricultural Experiment Station, made to the Commissioner of Agriculture in compliance with the provisions of section 87 of chapter 338 of the Laws of 1893.

Volume III. Sixteenth Annual Report of the New York Agricultural Experiment Station, made to the Commissioner of Agriculture in accordance with the provisions of section 85 of chapter 338 of the Laws of 1893.

TRANSMITTED TO THE LEGISLATURE JANUARY 14, 1898.

WYNKOOP HALLENBECK CRAWFORD CO.,
STATE PRINTERS,
NEW YORK AND ALBANY.
1898.

dup -

STATE OF NEW YORK.

DEPARTMENT OF AGRICULTURE.

FIFTH ANNUAL REPORT

OF THE

COMMISSIONER OF AGRICULTURE

FOR THE YEAR 1897.

TRANSMITTED TO THE LEGISLATURE JANUARY 14, 1898.

WYNKOOP HALLENBECK CRAWFORD CO.,
STATE PRINTERS,
NEW YORK AND ALBANY.
1898.

STATE OF NEW YORK.

No. 22.

IN ASSEMBLY,

JANUARY 14, 1898.

FIFTH ANNUAL REPORT

OF THE

Commissioner of Agriculture.

To the Honorable the Legislature of the State of New York:

In accordance with the provisions of the statutes relating thereto, I have the honor to herewith transmit the Fifth Annual Report of the work of the Department of Agriculture of the State of New York for the year ending September 30, 1897.

CHARLES A. WIETING,
Commissioner of Agriculture.

124602

DEPARTMENT OF AGRICULTURE.

Commissioner.

CHARLES A. WIETING, Cobleskill, N. Y.

Assistant Commissioners.

First Division......................GEORGE L. FLANDERS,
Albany, N. Y.

Second Division................FREDERICK J. H. KRACKE,
No. 317 Washington Market, New York, N. Y.

Third Division..........................HENRY S. AMBLER,
Chatham, N. Y.

Fourth Division.........................T. JAMES OWENS,
Steuben, N. Y.

Fifth Division....................S. BROWN RICHARDSON,
Lowville, N. Y.

Sixth Division.......................*CHARLES R. PAYNE,
Hamilton, N. Y.

Seventh Division.....................VERLETT C. BEEBE,
Arcade, N. Y.

Eighth Division......................WILLIAM T. HUGHES,
Room 221, Powers' Block, Rochester, N. Y.

Ninth Division.........................ASA L. TWITCHELL,
Springville, N. Y.

Tenth Division............................JAMES P. CLARK,
Falconer, N. Y.

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* Deceased, Charles T. Russell, Acting Assistant Commissioner.

REPORT.

In submitting this, the Fifth Annual Report of the Department of Agriculture, before proceeding directly to the statement of the work performed, I will call your attention to the fact that I have not made any change in the working divisions of the State. They are, as reported by me last year, as follows:

First Division.—Comprising the following counties: Albany, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie and Washington.

Second Division.—Comprising the following counties: Kings, New York, Queens, Richmond, Suffolk and one-half of Westchester.

Third Division.—Comprising the following counties: Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster and one-half of Westchester.

Fourth Division.—Comprising the following counties: Essex, Fulton, Hamilton, Herkimer, Montgomery, Oswego, Oneida and Warren.

Fifth Division.—Comprising the following counties: Clinton, Franklin, Jefferson, Lewis and St. Lawrence.

Sixth Division.—Comprising the following counties: Broome, Chenango, Cortland, Madison, Onondaga, Tioga and Tompkins.

Seventh Division.—Comprising the following counties: Chemung, Genesee, Livingston, Schuyler, Steuben and Wyoming.

Eighth Division.—Comprising the following counties: Cayuga, Monroe, Ontario, Seneca, Wayne and Yates.

Ninth Division.—Comprising the following counties: Erie, Niagara and Orleans.

Tenth Division.—Comprising the following counties: Allegany, Cattaraugus and Chautauqua.

The assistant commissioners in charge of the divisions during the fiscal year just ended were as follows:

First Division.—George L. Flanders.
Second Division.—Frederick J. H. Kracke.
Third Division.—Henry S. Ambler.
Fourth Division.—T. James Owens.
Fifth Division.—S. Brown Richardson.
Sixth Division.—Charles R. Payne.
Seventh Division.—Verlett C. Beebe.
Eighth Division.—Wm. T. Hughes.
Ninth Division.—Asa L. Twitchell.
Tenth Division.—J. P. Clark.

I have made but few changes in the employes of the Department. All new appointments that have been made since I have been Commissioner have been made in accordance with the Civil Service rules and regulations.

The general work of the Department consists in enforcing those provisions of law relating to

First. The enforcement of the milk law.

Second. The enforcement of the oleomargarine or imitation butter laws.

Third. The enforcement of the cheese and cheese brand law.

Fourth. The enforcement of the law relative to the care and feed of cows from which milk is drawn for sale.

Fifth. The enforcement of the vinegar law.

Sixth. The enforcement of the law relative to the diseases of domestic animals.

Seventh. The enforcement of the law relative to the prevention of diseases among bees and fruit trees.

Eighth. The distribution of money among the agricultural societies of the State.

Ninth. Conducting the work of Farmers' Institutes.

Tenth. Exercising such supervision and care relative to Geneva and Ithaca Agricultural Experiment Stations as is required by the Agricultural Law.

MILK.

The enforcements of the milk laws as provided by sections 20, 21, 22, 23, 24 and 25 of chapter 338 of the Laws of 1893.

Section 20 defines pure milk, and then fixes a standard below which milk cannot be sold upon the market as pure milk. An erroneous notion is apparently entertained by quite a number of people, to the effect that any milk that comes up to or above the standard is legally pure. They overlook entirely the fact that sub-heads 4, 5, 6, 7 and 8 of section 20, above referred to, are also a part of the law. The section referred to provides, among other things, as follows:

"The term adulterated milk, when so used, means:

1. Milk containing more than eighty-eight per centum of water or fluids.

2. Milk containing less than twelve per centum of milk solids.

3. Milk containing less than three per centum of fats.

4. Milk drawn from cows within fifteen days before and five days after parturition.

5. Milk drawn from animals fed on distillery waste or any substance in a state of fermentation or putrefaction or on any unhealthy food.

6. Milk drawn from cows kept in a crowded or unhealthy condition.

7. Milk from which any part of the cream has been removed.

8. Milk which has been diluted with water or any other fluid, or to which has been added or into which has been introduced any foreign substance whatever.

All adulterated milk shall be deemed unclean, unhealthy, impure and unwholesome. The terms, pure milk or unadulterated milk, when used singly or together mean sweet milk not adulterated, and the terms pure cream or unadulterated cream, when used singly or together mean cream taken from pure and unadulterated milk."

I am of the opinion that much agitation has been started and kept alive by those who are interested in bringing about a condition of things wherein milk shall be sold upon the market upon a guarantee system, that is, where the vendor shall guarantee a given amount of fat to be in the milk. I do not see any objection to selling milk that way where it is practical. For instance, I believe it is better by far to sell milk at creameries and factories where they have facilities for determining the amount of fat upon the fat basis, but it is not necessary in order to do this to do away with the standard. The standard is a bulwark of protection to the unsuspecting buyer and consumer in the large city, who has no means of determining the amount of fat, and possibly no idea of what milk contains. To purchase or sell a high grade milk under this system it is not necessary that any particular legislation should be enacted as it is already in vogue in many of the best creameries and butter and cheese factories in the State. The trouble with the advocates of this particular method is that while they know it works well in such places as I have mentioned they have had no practical experience with milk vendors in large cities, and they do not stop to consider the difference between an alert, practical creameryman, who has all the appliances with which to determine the richness of milk and the poor city buyer who has none. I cannot see or understand why this Department should modify its action or the Legislature should modify the law at the request or on the demand of people who have no evidence to offer that the law is wrong; mere assertion is not evidence.

In my last annual report I treated the subject to some extent but unfortunately for those who might desire to read it, it is not yet received from the printer. In that report I printed the views of the officials of several different States, who are charged with the enforcement of the dairy laws of their respective States, relative to the desirability of a milk standard. The milk laws of these States being similar to that of New York. The only one that in any way seemed to favor the fat basis method was Pennsylvania. Since that time Pennsylvania has passed a law creating a standard and her chief milk inspector in his annual report makes the following statement:

Legal Standards.

"It is an incorrect use of words to speak of a legally pure milk, for it is not the object of a legal standard to fix a standard of purity, but rather to prevent flagrant adulteration. While a few abnormal milks are found close to the minimum standards, yet the vast majority of pure milks are far above the legal standards in percentage constituents, owing largely to their richness in fat or cream. Nevertheless, a trifling amount of adulteration by added water would lower the percentage of solid, other than fat, not only below any legal standard, but also below that found in the milk from a herd of cows of any breed, however inferior, or in any condition however unsatisfactory. Experience proves that a legal standard for milk does protect the consumer by preventing the sale of adulterated and impure milk. A number of analyses of milk have been submitted to the public in the daily papers from time to time, which cannot be considered authoritative because the integrity of the samples has not been certified to, the method of analysis not stated, and the name of the analyst not given. Upon these data a great deal of fallacious reasoning has been indulged in concerning the very poor showing of milk from individual cows in an abnormal condition to the effect that the limit should be made so low as not to exclude such milk from the market—it being pure milk (that is, as it comes from the cow). It should be borne in mind that the milk supplied to the consumer is the product of the herd, and not that of the individual cow.

"A milk standard cannot be considered too high if the dairyman can readily and uniformly furnish milk of the required quality. In Massachusetts the standard is 13 per cent. and 3.70 per cent.; in Minnesota, 13 per cent. and 3.50 per cent.; in New Hampshire, 13 per cent.; in Iowa, 13.13 per cent. and 3.50 per cent. of total solids and fat respectively, and the dairymen in these States have no trouble in meeting the requirements of the law. Furthermore, as the quality has improved the quantity consumed has increased. It is a significant fact that these standards could not have been made by the Legislatures without the consent and approval of the dairymen themselves.

"On October 30th ult., Mr. William T. Painter, Lenape, Chester Co., Pa., brought for analysis a fair sample of milk from his dairy. He thought the milk would not come up to the State standard of 12.50 per cent. total solids and 3 per cent. of butter fat. His cows had been eating a great deal of "green stuff," he said, and not being in the best condition were giving a poor, thin milk. He believed it would be condemned by the Milk Inspector and its sale would be stopped, thus causing him to suffer from the enforcement of an unreasonable law. He intimated that he could produce a much better quality of milk under ordinary circumstances. His fears were groundless, analysis showing results far above the standard.

	Per cent.
Total solids	13.80
Butter fat	4.68
Solids, not fat	9.12
Ash	.70

The people are entitled to this kind of milk, and if ordinary cows, not at their best, produce such excellent milk, the same and even better results can be secured by all other dairymen.

Positive evidence of adulteration is furnished, a fair sample of herd milk being taken:

(1.) When the Sp. gr., at 60 degrees F., is less than 1.029, the fat being normal, the milk is watered

(2.) When the Sp. gr., at 60 degrees F., is more than 1.035 and the fat less than 4 per cent., the milk is skimmed.

(3.) When the fat is less than 3 per cent. and the total solids more than 12.50 per cent., the milk is skimmed

(4.) When the fat is less than 3 per cent., and the Sp. gr. at 60 degrees F., is less than 1.0319, the milk is skimmed and watered.

From these irrefutable propositions it must appear that all objections to legal standards for milk are without substantial foundation, and are urged without sincerity.

Suspicion of adulteration, by skimming or watering, or both, is excited when the milk is close to the legal standard (this is a corollary of the proposition upon which minimum standards are based), and also when there is a lack of symmetry in the relative proportions of total solids, fat, and the solids not fat. In the latter case, suspicion is not always susceptible of proof by physicial inspection or chemical analysis.

A grave danger may be alluded to in this connection in the use of separator milk. The dairymen send their milk to a creamery where the milk from all the dairies in the district is mixed, the cream taken out by a centrifuge, and some of the separator milk may be sent back to the farms and some sent to the city. If the milk from any of these dairies should contain the specific bacilli of typhoid fever or diphtheria, the result would be the widest possible dissemination of disease through the infected milk."

It would seem from the above quotation from the Pennsylvania report that the experiences in that State are not dissimilar to those in other States. In reading the article one thing in particular should be noted, namely: That there, as elsewhere, samples have been taken and analyzed without knowledge of whether they were pure milk or not, and then an argument is based, on that analysis, against the standard. This is not new by any means. It is a method that has been adopted in the State of New York by men of sufficient experience in such matters to know better, but it seems to obtain when no better evidence is forthcoming. As an outgrowth of this sentiment that has been created, to the effect that the law was or might be oppressive, there has grown up a fear among some people similar to the one entertained by the man Painter above referred to, that their milk might be below the standard, not because the fear was well grounded but because a rumor to that effect has been circulated and the party having no knowledge to the contrary assumed that the rumor was correct. This has produced a condition whereby it has become difficult in some sections of the State to enforce the law, no matter what the evidence is. For instance: We have been treated to the spectacle of a witness coming on the stand for the defense in our milk cases, swearing he was a "pharmaceutist" (just why such a man is qualified as a chemist is probably best known to the deponent); he also swore that the milk that he analyzed was given to him sixty days from the date at which we took our sample and that it was sweet; that he analyzed it. He also swore that milk when put into a bottle without previous pasteurization, sterilization or without the use of any chemical preservatives and corked in, would keep seven years without souring. Notwithstanding the fact that the evidence given by the man who posed as a "pharmaceutist" doing chemical work and who analyzed the sample of milk was shown to be worthless by two chemists, eminent in their profession, whose ability and integrity never have been questioned, yet the evidence of this practically unknown and inexperienced pharmaceutist seems to have prevailed as the verdict was "no cause of action." I am of the opinion that this condition of things is due largely, if not entirely, to a sentiment that is being seduously worked up in that section of the State to the effect that our standard is too high, and that, therefore, people are liable to be wrongfully prosecuted. It is the experience of every State and country that has given any evidence upon the subject that a standard should be set, below which milk should not be sold upon the market as pure, and the facts as set forth by them would indicate that our standard was reasonably low. There is no question but what the standard is very low, particularly as to butter fat. It would seem to me that it ought to be plain that the entire consuming public are materially, if not vitally, interested in the outcome of this question. The people should not again be forced to take as milk anything that may be presented that bears the color and outward semblance of milk. If legislation is enacted which produces that condition of things, then they will be again at the mercy of all classes of men, including the slovens and dishonest, and there is no knowing what the results may be within our State.

My predecessors have called your attention on several occasions to the fact that the milk standard as fixed in this State was based upon facts determined by a large number of analyses made by chemists of known standing and ability, of milk of known purity taken in different parts of the world, and that its results indicated that milk should not have over 87½ per cent. of water, nor less than 12½ per cent. of total solids nor less than 3½ per cent. of butter fat. (See First Annual Report of the New York State Dairy Commissioner, pages 57 to 59, which reads as follows):

Percentage of Constituents in Average Milk.

"In order to detect the adulteration of milk by the addition of water or by the removal of cream, it becomes of great importance to determine whether the constituents of average milk vary between certain limits, and what these limits are.

"The constituents vary, and more especially the fatty matter, according to age, breed, time before or after calving, the quality of the food, condition of the animal, etc. But even taking into consideration these facts, we find that nature, in its endeavor to produce a healthy food for the young, will in a great measure overcome surroundings which are most antagonistic to the production of healthy, normal, milk.

"So much has been done to determine what the standard is, below which pure, healthy milk never falls, that we know now with absolute certainty that the variation in the constituents of average milk is between certain well-defined limits.

"The following tables, prepared from analyses of many investigations, and, as will be seen, from a very large number of cows, and from all parts of the world, show most conclusively what the limit or standard of purity is:

AUTHORITY OR ANALYST.	Number of cows.	Water.	Total solids.	Fat.	Solids, not fat.	Sugar.	Casein.	Salt.
James Bell	216	87.17	12.83	3.83	9.00	......	......	0.71
James Bell	24 dairies.	86.78	13.22	4.12	9.10	......	......	0.72
C. Estecourt	22 dairies.	87.26	12.74	3.37	9.37	......	......	.....
J. Carter Bell	183	86.40	13.60	3.70	9.90	......	......	0.76
J. Cameron	42	86.53	13.47	4.00	9.47	......	......	.....
C. Cameron	40	87.00	13.00	4.00	9.00	4.28	4.10	0.62
C. Cameron	100	86.75	13.85	4.60	9.25	......	......	.....
Fleischmann & Veith	120	87.78	12.22	3.20	9.02	......	......	.....
Veith	60	87.20	12.80	3.10	9.70	......	......	.....
Veith	9,120	86.97	13.03	3.52	9.51	......	......	.....
Wanklyn	Average.	87.50	12.50	3.20	9.30	......	......	.....
A. Winter Blyth	Average.	86.87	13.13	3.50	9.63	......	......	.....
Marchand	Average.	87.15	12.85	3.55	9.30	......	......	.....
Henry & Chevalier	Average.	87.02	12.98	3.13	9.85	4.77	4.48	0.60
Vernois Becquerel	Average.	86.40	13.60	3.60	10.00	......	......	.....
Payen	Average.	86.60	13.40	3.50	9.90	......	......	.....
O. C. Wiggin	58	85.92	14.08	4.01	10.07	4.29	4.99	0.79
E. Calder	27	87.23	12.77	3.32	9.45	......	......	.....
Sharpless	34	85.85	14.15	4.62	9.53	4.82	4.06	0.65
Haidlen	Average.	87.30	12.70	3.00	9.70	......	......	.....
Letherby	Average.	86.00	14.00	3.90	10.10	5.20	4.10	0.80
J. Konig	Average.	87.30	12.70	3.00	9.70	5.00	4.00	0.70
Boussingault	Average.	87.40	12.60	4.10	8.50	5.10	3.20	0.70
Muspratt	Average.	86.43	13.57	4.43	9.14	4.73	3.74	0.67
Dieulafait	Average.	87.64	12.36	3.11	9.25	4.22	4.18	0.85
Group Bezanez	Average.	85.70	14.30	4.31	9.99	4.04	5.40	0.55
Brinton	Average.	86.00	14.00	4.50	9.50	3.50	5.50	0.70
Chandler	1,700 qts.	87.45	12.55	3.83	8.72	......	......	.....
Newton	Average.	87.50	12.50	3.50	9.00	......	......	.....
Bartley	Average.	87.50	12.50	3.50	9.00	......	......	.....
White	Average.	87.50	12.50	3.50	9.00	......	......	.....
Waller	Average.	87.50	12.50	3.20	9.30	......	......	.....
Babcock	Average.	85.53	14.47	5.09	9.39	5.15	3.57	0.67
Church	Average.	86.30	13.70	3.70	10.00	5.10	4.10	0.80
Edward Smith	Average.	86.40	13.60	3.61	9.90	3.80	5.52	0.06
Martin	Average.	86.50	12.50	3.20	9.30	......	......	0.67

"The following table will show the result of the analyses of milk from herds in various sections of this State. All of the samples were milked in the presence of an inspector and delivered to me in the same condition as when taken from the cow:

Number of cows.	Water.	Fat.	Casein and sugar.	Salts.	Solids, not fat.	Total solids.	Number of inspection and analysis.
40	87.47	3.29	8.57	0.67	9.24	12.53	D 1504
28	87.34	3.33	8.56	0.67	9.23	12.66	D 1513
10	86.98	3.62	8.72	0.68	9.40	13.02	B 2561
1	87.05	3.40	8.92	0.63	9.55	12.95	B 2526
27	87.03	3.80	8.48	0.69	9.17	12.97	D 1585
1	84.71	3.79	10.81	0.69	11.50	15.29	B 2690
10	86.85	3.58	8.89	0.68	9.57	13.15	B 2694
11	87.34	3.44	8.52	0.70	9.22	12.66	D 1595
27	86.97	3.33	8.90	0.80	9.70	13.03	D 1666
1	84.47	6.24	8.48	0.71	9.29	15.53	B 2762
24	85.82	4.80	8.66	0.72	9.38	14.18	B 2772
14	86.67	3.49	9.12	0.72	9.84	13.33	B 2788
20	86.38	4.45	8.56	0.71	9.27	13.52	E 5
20	82.10	8.31	8.80	0.79	9.59	17.90	D 1703
31	86.19	4.64	8.40	0.77	9.17	13.81	C 1854
31	86.88	3.90	8.45	0.77	9.22	13.12	C 1855

"If then, we assume that in healthy, normal cow's milk there should be not more than 87.5 per cent. of water, 3.2 per cent. of fat, 9.3 per cent. of solids, not fat, and 12.5 per cent. of total solids, we are certainly well within the limits."

I have yet to learn of any facts that would seem to dispute, or be reasonably in conflict with the facts above referred to as set forth by one of my predecessors.

Notwithstanding all the evidence that has been accumulated by this and other States and foreign countries tending to show these facts, your honorable body or the committee representing you has been for a number of winters importuned to make modifications in the milk law, all importunities being based on allegations to the effect that the law was unjust, and yet the promotors of such measures have never yet given any instance where anybody had ever been harmed in any way by those enforcements, so I am inclined to say that the fears are entirely imaginary.

Under the enforcement of the present laws the reports of the dairy statistician in New York city shows, beginning with the year 1894, an increase of the amount of milk shipped in that city over 1893 of 1,814,651 gallons; for the year 1895, as compared with 1894, shows an increase of 14,072,260 quarts of milk, cream and condensed milk shipped into the city of New York; and the year 1896, as compared with 1895, shows an incerase of 29,703,600 quarts of milk, cream, and condensed milk; for the year 1897, as compared with 1896, shows an increase of 11,850,040 quarts of milk, cream and condensed milk.

This would seem to agree with the statement made by the assistant commissioner of agriculture in that division, who says, in substance, that a glance at the map of the territory from which the metropolitan division draws its milk is interesting; that while it used to get its supply from Long Island, Westchester and Orange counties, now dealers reach out beyond the boundaries of these counties to far-away Steuben, Herkimer and Oneida; that the milk supply is drawn two or three hundred miles to the consumers in New York.

This is true proportionately of the cities of other divisions of the State. The reports received at this office are to the effect that the wholesale and retail dealers in this commodity have almost abandoned the practice of watering milk, and that the enforcement of the agricultural law is practically the cause of it.

There is, however, one form of adulteration of milk that prevails to some extent yet, namely, the mixing of skimmed milk with pure milk in such proportions as to leave the result of the commodity still rich enough so that it will have 12 per cent. of total solids and 3 per cent. of butter fat. There is considerable of this done, in my judgment, and this department has no means of determining the fact, except by putting detectives at work watching the creameries and milk stations to get visible evidence of the fact. To do this would be so expensive that the appropriation made for our work would not suffice. My attention has been called to this fact by milkmen who are honest and desire to have it stopped, who suggest that a law should be passed by the Legislature requiring all milk vendors who sell or ship milk to the market to make a monthly report to this department, duly verified;

that that report be made on blanks furnished by the Department of Agriculture in which the Commissioner of Agriculture shall be informed relative to the milk and cream they have handled.

I submit the proposition to your honorable body for consideration.

SKIMMED MILK.

Section 31 of chapter 33 of the General Laws known as the Agricultural Law, the enforcement of which this Department is charged with, provides as follows:

Section 31. When Prohibition Does Not Apply to Skim-Milk or Skim-Cheese. Except in the counties of New York and Kings, the prohibitions contained in this article against the sale of adulterated milk shall not apply to skim-milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming, sold for use in the county in which it is produced or an adjoining county, if it is sold for and as skimmed milk. The prohibitions in this article against the sale of cheese made from unadulterated milk or cream shall not apply to pure, skim-cheese made from milk which is clean, pure, healthy, wholesome and unadulterated except by skimming.

This Department has experienced considerable difficulty in enforcing the milk law so far as skimmed milk is concerned. The difficulty arises from the fact that certain milk peddlers sell both skimmed and pure milk from the cans that are on the same wagon. There is nothing upon the wagon itself to show the consuming public that there is skimmed milk there for sale, yet if one of our agents examines the milk he will be promptly notified that certain milk is skimmed and is being sold for skimmed milk, yet it is not altogether certain that when the inspector's back is turned that the milk is not dipped for pure milk. I have been informed that such is the case. Certain I am that our agents have examined milk and have been told that it was skimmed milk, being sold for such, when the analysis showed it to be badly watered milk. I am of the opinion that some legislation should be enacted providing that skimmed milk should not be sold with pure, so that there can be no doubt that the purchaser gets it as and for skimmed milk.

LACTOMETER.

Quite a little has been said in the press during the last year relative to the use of the lactometer by the agents of this Department, to the effect that it was an unreliable instrument, and that our men were prosecuting people for selling adulterated milk when their evidence was based upon their experiments made by the lactometer. For that reason I take this opportunity to call your attention to the fact that the lactometer is used for no such purpose. It is a modified hydrometer used by our agents for determining the specific gravity of milk and for that only. The temperatures at which the milk is examined are any temperature between fifty and seventy degrees Fahrenheit. If the specific gravity of the milk is not right at the given temperature and it does not look right to the agent, he then takes a sample in accordance with the law and submits it to the chemist. This sample is analyzed and upon that analysis this Department acts, if at all, so that you will readily see that the lactometer is used only by our agents for the purpose of determining whether they had better take a sample for chemical anlysis.

OLEOMARGARINE.

The experience in the work of oleomargarine during the past year has been about the same as for the last few years. The violations of the agricultural law relative to the sale of this peculiarly fraudulent product have been clandestine and it has required continued vigilance in order to detect the sales that were being made by the persons dealing in it. The main effort on the part of the dealers in this product was made by dealers living outside of our State endeavoring to induce the keepers of hotels, boarding-houses, restaurants and semi-public institutions to buy it for cooking purposes and for consumption upon the table in place of butter. It is in every instance found to be a close imitation of butter, in looks, smell and taste, so that there can be no doubt that the motive in making it in that way was to deceive the consumer wherever he might be. There are a few persons who are, with the full knowledge of the law of this State, endeavoring to systematically place these goods in this State in violation of the law, but to so do it as to elude the agents of this Department. I am utilizing the force to the best possible advantage, with the means at my command, to stop the traffic and to prevent the deception that is being practiced upon the consumer aside from the interests above spoken of. The largest part, if not nearly all, is sold in New York and Brooklyn and in the river towns north of New York. Most of the cases we have been able to make have been in New York city. For a detailed statement of the work relative to this commodity please see the reports of the assistant commissioners herewith submitted.

PEOPLE v. ARMOUR.

Since my last report to you the changes in the status in this case have been very little. What litigation has been had has been confined to the struggle between the attorneys for the people and the attorneys for Armour & Company over the question as to whether the State should be allowed to examine the books of certain railroad companies to ascertain the amount, if any, of oleomargarine shipped into this State by Armour & Company during the pendency of the injunction issued by Mr. Justice Coxe of the Circuit Court in March, 1894, which he vacated on motion of the attorney representing this Department in December of the same year. The injunction reads as follows:

"At a special term of the Circuit Court of the United States of America, for the Northern District of New York, in the Second Circuit, held at the United States court rooms in the city of Utica, on the 3d day of March, A. D., 1894.

Present — Hon. Alfred C. Coxe, Judge.

PHILIP D. ARMOUR ET AL.

against

FREDERICK C. SCHRAUB ET AL.

On reading and filing the order to show cause why an injunction should not be granted herein, dated February 1, 1894, and upon the papers on which the said order to show cause was granted, and also upon the supplemental affidavits now on file in this court, and after reading the defendant's answer and affidavits in opposition thereto, filed February 13, 1894:

Now, after hearing Mr. Edwin H. Risley, of counsel for the complainants, in favor of said motion, and Mr. Charles D. Adams, of counsel for the defendants, and Mr. Frederick C. Schraub appearing in person, in opposition thereto, it is

Ordered, That the defendant Frederick C. Schraub, as Commissioner of Agriculture of the State of New York, his agents, servants and employees be restrained, until the further order of this court, from prosecuting any suits in the courts of the State of New York against the complainants or their agents to restrain them from importing or selling within this State oleomargarine in original packages, and from interfering in any manner with the complainants or their agents regarding such original packages.

This order is upon the express condition, however, that until the further order of the court, the complainants shall not establish any agencies within this State for the sale of oleomargarine in original packages in addition to those already existing, viz.: one each in the cities of New York, Albany, Utica, Rochester and Buffalo.

This order is upon the further condition that during the like period the complainants are to take out no additional licenses under the revenue laws of the United States for the sale of oleomargarine in original packages within this State, but this provision is not intended to prohibit a renewal of existing licenses. Nothing in this order shall be construed to restrain the said commissioner, his deputies or agents from prosecuting any person manufacturing oleomargarine in this State, or any person dealing in or selling oleomargarine in broken packages after they become mingled in the common mass of property within this State, or from prosecuting any person who sells oleomargarine fraudulently, representing it to be butter, whether in original packages or otherwise.

Either party, upon proof that the conditions of this order have been violated, may apply, upon notice, to vacate or modify the same, it being the intent and purpose of this order to preserve, as far as possible, the present status in this State and to keep unimpaired the existing rights of both the complainants and defendants, pending the determination of the questions involved by the Supreme Court of the United States. It also appearing that there are now pending in the Supreme Court of the State of New York two actions, begun, respectively, by the defendant Schraub in the name of The People of the State against William H. Hackett, of Utica, N. Y., and Arthur Frost, of Rochester, N. Y., in which action some of the questions involved in this action are also pending; it is

Further ordered, That the defendant Schraub may, if he so desires, prosecute to final hearing and decision one of said actions, and may have 30 days from the date of this order in which to elect which of said actions he will prosecute, and having so elected, the stay heretofore granted is to apply to the other of said actions.

Nothing in this order shall apply to any suit begun by the defendant Schraub in the name of The People of the State prior to the filing of this bill.

ALFRED C. COXE,
U. S. J.

The order vacating the injunction reads as follows:

UNITED STATES CIRCUIT COURT.

Northern District of New York.

PHILIP D. ARMOUR ET AL.

against

FREDERICK C. SCHRAUB, COMMISSIONER, ETC., ET AL.

This motion having come on for hearing at a term of this Court, held at the United States Courthouse in the city of Utica on the 24th day of December, 1894, now, after hearing Mr. C. D. Adams in favor of said motion and Mr. E. H. Risley opposed, it is

Ordered, That the said motion be and the same is hereby granted and the said order of March 3, 1894, is hereby dissolved, vacated and discharged.

ALFRED C. COXE,
U. S. J.

The question involved in the Plumley case having finally been decided in favor of the constitutionality of the State law of Massachusetts, the particular feature of which was in dispute being the same or similar to one in our laws, namely: forbidding the manufacture, sale, offering or exposing for sale of any oleaginous substance in imitation or semblance of butter not the product of the dairy, left the firm of Armour & Company in the attitude under the injunction after it was vacated of having violated a constitutional State law providing they had offered any such goods for sale within this State.

My predecessor in office immediately caused papers to be served on Armour & Company, or its representative, to recover a certain amount of money which he assumed that that company owed this State for violations during the time of the existence of the injunction. He then proceeded to find out what he could from railroad companies which he assumed had as common carriers brought these goods into the State for Armour & Company. Being unable to obtain the evidence he desired he got an order from the court for certain railroad companies to show cause why they should not allow the attorneys for the State to examine their books to get this information. The battle since that time has been upon this question and the State has finally obtained the right to examine these books and a referee has been appointed to take the evidence.

VINEGAR.

Article 3 of Chapter 338 of the Laws of 1893, of the Agricultural Law, is entitled "Adulterated Vinegar," and provides as follows:

ARTICLE III.

ADULTERATED VINEGAR.

Section 50. Definition of adulterated vinegar.
51. Manufacture and sale of adulterated or imitation vinegar prohibited.
52. Packages containing cider vinegar to be branded.
53. Penalties.

Section 50. Definition of Adulterated Vinegar.—All vinegar which contains any proportion of lead, copper, sulphuric acid, or other ingredients injurious to health, or any artificial coloring matter, or which has not an acidity equivalent to the presence of at least four and one-half per centum, by weight, of absolute acetic acid or cider vinegar which has less than such an amount of acidity, or less than two per centum of cider vinegar solids on full evaporation over boiling water, shall be deemed adulterated. The term cider vinegar, when used in this article means vinegar made exclusively from pure apple juice.

Section 51. **Manufacture and Sale of Adulterated or Imitation Vinegar Prohibited.**—No person shall manufacture for sale, keep for sale, or offer for sale:

1. Any adulterated vinegar.
2. Any vinegar or product in imitation or semblance of cider vinegar which is not cider vinegar.
3. As or for cider vinegar, any vinegar or product which is not cider vinegar.

Section 52. **Packages Containing Cider Vinegar to be Branded.**—Every manufacturer or producer of cider vinegar shall plainly brand on the head of each cask, barrel, keg or other package containing such vinegar, his name and place of business and the words "cider vinegar." And no person shall mark or brand as or for cider vinegar any package containing that which is not cider vinegar.

Section 53. **Penalties.**—Every person violating the provisions of this article shall forfeit and pay to the people of the State the sum of one hundred dollars for each violation.

This law I have judiciously enforced during the year. I have found some cases where it seemed to me that the right thing to do was to notify the parties handling the vinegar to be careful about future sales and let the matter rest there. It was in cases where, for instance, a small grocer doing scarcely a living business had part of a barrel of vinegar which he had bought of some farmer which did not show the required amount of acidity, but had sufficient solids so that when the sugar was fully developed in the cider there would have been sufficient acidity and solids both, in other words, he was selling hard cider, better known as cider vinegar stock. In case of adulteration of vinegar by the addition of water, we have prosecuted, as a rule, if they did not settle, to a determination by the court. I have given instructions to the assistant commissioners to use all possible diligence to ascertain the presence of any colored or imitation vinegar, or vinegar that had been fortified with pyroligneous acid. We have made quite a number of cases, and while I do not believe this class of goods has been driven from the market of this State, still I do believe that the sale has been reduced to the minimum, and it is only a question of time when they will have to cease.

CONTAGIOUS AND INFECTIOUS DISEASES.

Under the provisions of article 4 of chapter 338 of the Laws of 1893 this Department has charge of the enforcement of the law tending to restrain or eradicate all contagious and infectious diseases, excepting tuberculosis and glanders, affecting domestic animals that may be brought into or break out within the borders of this State. There have not been during the past year a great number of outbreaks, nor a condition that might be called an epidemic. There has broken out, however, among the animals of this State in a few localities the infectious or contagious diseases of anthrax, Texas fever, hog cholera, swine plague and rabies.

Rabies has broken out in the counties of Saratoga and Columbia, but has by the diligent effort of the experts of this Department been controlled and confined. The other diseases have broken out in a few places within the State. For details as to these diseases and the care that this department has given them, see the reports of Assistant Commissioner Henry S. Ambler, Dr. Wm. Henry Kelly, Dr. H. B. Ambler, Prof. V. A. Moore and Agent M. Quigley, hereto attached. From the little experience that we have had in this Department with these and other diseases which upon investigation did not prove to be contagious shows that they are largely due to unhealthy and dirty surroundings or bad food. For this reason I am of the opinion that the liability of animals to contract disease would be greatly lessened if their sanitary surroundings were so improved as not to invite or encourage the disease. I have, therefore, done what I reasonably could under the law during the past year to encourage, among persons having such animals in care or custody, a cleanliness of surroundings for all inclosures of buildings and yards in which domestic animals were kept and a proper supply of pure air and cleansing at reasonable intervals. The danger of the spreading of these contagious diseases would, in my judgment, be reduced to a minimum by observing proper sanitary regulations. I believe also that many of the milk gathering stations and factories of this State could be improved in this respect by a proper inspection at frequent intervals. This work certainly could do no harm, and, in my judgment, would do a great deal of good, as it would tend to lessen if not do away with the danger that comes to the milk consuming public through milk as a medium. It is a fact that does not need verification from me that some of the milk gathering stations and factories in this State are in a condition which absolutely requires such supervision. There are many, a majority, that are not in this condition.

There have been few or no calls on this Department during the past year for aid relative to the infectious and contagious diseases known as black knot and yellows that exists among fruit trees.

There have been two complaints made to this Department relative to the infectious and contagious disease known as foul brood among bees.

FARMERS' INSTITUTES.

The work of the Farmers' Institutes this year has been larger than ever before. The Director informs me he has received calls for nearly one thousand Institutes, a call which I understand to be unparalleled in the history of Farmers' Institutes in this State. This seems to speak well for the work, indicating that it is not only imparting useful information, but that it is well received.

SUGAR BEETS.

Chapter 500 of the Laws of 1897 became such by the approval of the Governor, May 18, 1897, The law reads as follows:

CHAPTER 500.

An act to amend the agricultural law, relative to the promotion of sugar beet culture by scientific and practical experiment, and making an appropriation therefor.

Became a law May 18, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled " An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," is hereby amended by inserting after article four, a new article to be known as article five, and to read as follows:

ARTICLE V.

SUGAR BEET CULTURE.

Section 71. Commissioner of agriculture to apportion moneys appropriated for promotion of sugar beet culture.
72. Persons, et cetera, to whom moneys may be apportioned.
73. Statements; inspections, branding of packages.
74. Inspectors, to be appointed by commissioner.
75. Weighman, powers and duties.
76. Apportionment of moneys by commissioners of agriculture.

Section 71. **Commissioners of agriculture to apportion moneys appropriated for promotion of sugar beet culture.** Money appropriated for the promotion of sugar beet culture by scientific and practical experiment shall be appropriated by the commissioners of agriculture to the persons, firms, associations or corporations entitled thereto, according to the provisions of this article.

§ 72. **Persons, et cetera, to whom moneys may be distributed.** Any person, firm association or corporation, engaged in the manufacture of sugar from beets grown in the state of New York, upon registration in the office of the commissioner of agriculture, and filing a certificate therein, stating the name of such person, firm, association or corporation, the location of the factory, and the capacity thereof, and the time when the manufacture of sugar began or is to begin, shall be entitled to a distributive share of the amount appropriated for the promotion and encouragement of sugar beet culture, as provided in this article. No such person, firm, association or corporation shall receive any portion of the moneys so appropriated, unless all the beets used in the manufacture of such sugar are grown within the state of New York, and unless the grower received therefor a net sum of not less than five dollars per ton, and provided such beets are not grown by the manufacturer of such sugar. No money shall be distributed to such manufacturers unless the sugar manufactured by them shall contain at least ninety per centum of crystallized sugar. The commissioner of agriculture may expend such sum or sums as he may deem necessary or expedient, not exceeding ten per centum of the amount appropriated for the purposes of this article, in practical and scientific experiments in growing sugar beets in one or more sections of this state, for the purpose of determining the adaptability of the soil thereof for the production of sugar beets.

§ 73. **Statements; inspections, branding of packages.** The quantity and quality of sugar upon which said money is to be paid shall be determined by the commissioner of agriculture of this state, with whom all claimants shall, from time to time, file verified statements showing the quantity and quality of sugar manufactured by them, the price paid the producer for beets and upon which said money is claimed. The said commissioner shall, without unnecessary delay, visit or cause to be visited by such persons as he shall designate in writing, the factory where said sugar has been produced or manufactured, and take such evidence by the sworn testimony of the officers or employes of such factory or others, as to the amount and quality of sugar so manufactured, and the price paid for beets as to him or the person so designated by him shall appear satisfactory and conclusive. The sugar so manufactured shall be placed by the manufacturer in original packages, which shall be examined and branded by the said commissioner or person by him designated, with a suitable brand, showing the quantity and the quality of sugar contained in each of said packages, of which an accurate account shall be kept by said inspector, and filed in the office of the commissioner of agriculture of this state.

§ 74. **Inspectors to be appointed by commissioner.** It shall be the duty of the commissioner of agriculture to appoint a resident inspector in each town or city where one or more manufactories of sugar may be located in this state, the aggregate output of which factories shall exceed two thousand pounds of sugar per day, and such examiner shall make such examinations, take such evidence and make such records and reports as is specified in section two of this act. The compensation or fee for such service of said inspector shall not exceed the sum of twenty-five cents for each package so branded, nor the sum of five dollars per day for any one day's service, and such resident inspector shall be required to give a good and sufficient bond in the sum of not less than two thousand dollars to the state of New York, contingent on the faithful performance of his duties, said bond to be approved by the said commissioner of agriculture. Said fees or compensation, together with the cost of said brand and any and all analysis that the said commissioner of agriculture or other authorized inspector shall require to be made, shall be borne and paid by the claimant of said money.

§ 75. **Weighman, powers and duties.** It shall be the duty of the commissioner of agriculture to appoint at each sugar manufactory in this state where the output of such manufactory shall exceed two thousand pounds of sugar per day, a person who shall weigh all beets received by the person or persons, corporation or association operating said manufactory. Such person shall be known as the weighman, and he shall keep accurate record of all duties performed by him. He shall discharge all duties pertaining to his position in an impartial manner, and shall furnish the commissioner of agriculture with a good and sufficient bond in the sum of two thousand dollars for the faithful discharge of his duties as prescribed by this act. The commissioner of agriculture may appoint such person or persons to assist said weighman as the service to be performed may require. Each person so appointed shall give bond as provided by this section. The weighman shall take into his possession, promptly on receipt of beets at such manufactory, such samples of beets as he deems fair and equitable, from which to remove dirt or other dockage. He shall then promptly weigh all beets from which samples have been taken and keep an accurate record of all weights, and all of such records shall show the names of both the seller and the buyer. The weights furnished by said weighman shall be accepted by both the seller and the buyer, and upon such weights so furnished settlement between the seller and the buyer shall be made. The compensation or fee allowed such weighman shall not exceed the sum of five dollars per day for time actually employed and for his assistants a sum not to exceed three dollars per day for the time actually employed. All expenses arising from the duties of said weighman or his assistants, as prescribed by this act, shall be paid by the person or persons, corporation or association operating such manufactory where such expense is incurred.

§ 76. **Distribution of moneys by commissioner of agriculture.** On or before the first day of February in each year, the commissioner of agriculture shall prepare a detailed statement of the quantity of sugar manufactured by each person, firm or association or corporation entitled to receive a portion of the moneys appropriated for the promotion and encouragement of sugar beet culture. He shall apportion to each such person, firm, association or corporation the moneys so appropriated according to the amount of sugar of the grade described in this article manufactured by each of them, during the preceding year. Not more than one cent a pound shall be paid in any one year on account of the sugar so manufactured. Such commissioner of agriculture shall certify to the comptroller the amount apportioned to each manufacturer of sugar according to the provisions of this article; and the comptroller shall draw his warrant upon the state treasurer for the amount so certified, payable to the party or parties to whom such apportionment was made.

§ 2. Article five and six of said act are hereby made articles six and seven.

§ 3. The sum of twenty-five thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury not otherwise appropriated, to be paid in the manner prescribed in this act for the purpose of making effectual the provisions thereof.

§ 4. This act shall take effect immediately.

Immediately upon the passage of this act I sent one of my assistants to New York city to procure beet seed of the most improved kind for planting. He procured 100 kilos of beet seed, fifty kilos of which was a German beet known as Klein Wanzlebener, and fifty kilos of which was a French beet known as Vilmorin Improved, both of them thoroughbred beets.

I thereafter, as quickly as possible, made arrangements for fourteen patches with individuals in different parts of the State as follows:

Patch No. 1. Frederick & Severson, Altamont, N. Y.
Patch No. 2. J. P. Clark, Falconer, N. Y.
Patch No. 3. Herman L. Kent, Westfield, N. Y.
Patch No. 4. Henry S. Ambler, Chatham, N. Y.
Patch No. 5. L. D. Taylor, Cortland, N. Y.
Patch No. 6. Geo. M. Gillette, Bergen, N. Y.

Patch No. 7. Wm. Gilligan, Lowville, N. Y.
Patch No. 8. Reuben Morey, Eaton, N. Y.
Patch No. 9. Geo. W. Sime, Brockport, N. Y.
Patch No. 10. C. H. Philo, Washington Mills, N. Y.
Patch No. 11. A. J. Hainer, Cobleskill, N. Y.
Patch No. 12. Horace G. Tennant, Schoharie, N. Y.
Patch No. 13, Arthur Flanders, Hopkinton, N. Y.
Patch No. 14. J. N. Witherill, Arcade, N. Y.

With each one of the above named persons arrangements were entered into whereby they should each put in one-half acre of beets, one-half of which should be of the variety known as Klein Wanzlebener and the other half known as Vilmorin Improved, with the exception of Henry S. Ambler, of Chatham, N. Y., who put in an entire acre.

The arrangements made with each of these persons was in substance as follows: They should plow and prepare the ground and plant the seed as per the instructions given them. They were then to cultivate, thin out and weed the beets as per instructions, which were also given them. When this was done they should harvest the beets as per instructions, sending samples for analysis to the place I might indicate, and in the way or manner that I might name. This Department was to pay for all services and labor and for such other expenditures as were necessitated or required by it, and pay a given sum to the party furnishing the ground for the use of the same and for the daily and weekly reports that were to be made to this office on blanks furnished, so that we might have suitable data relative to the planting and growing of the said beets. The amount to be paid was in most cases $25, with one or two exceptions, where the parties agreed for $20.

Sugar Beet Crop Reports.

PATCH No. 1.

REPORT FOR WEEK ENDING MAY 29, 1897.

May 28.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 56° F.; partly cloudy; planted.

May 29.—6 a. m., 55° F. Noon, 58° F. 6 p. m., 52° F.; rainfall, .10 inch; cloudy.

General remarks.—Corn stubble; spring plowed; harrowed with Acme harrow; cross-harrowed with same; planked, then harrowed again. Ground was in good condition when seed was sown. Sowed seed with New Model drill, about fifteen pounds per acre.

REPORT FOR WEEK ENDING JUNE 5, 1897.

May 30.—6 a. m., 57° F. Noon, 66° F. 6 p. m., 63° F.; clear.

May 31.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 69° F.; partly cloudy.

June 1.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 61° F.; partly cloudy.

June 2.—6 a. m., 58° F. Noon, 63° F. 6 p. m., 60° F.; clear.

June 3.—6 a. m., 63° F. Noon, 70° F. 6 p. m., 65° F.; rainfall, .80 in.; showery; seed germinated.

June 4.—6 a. m., 64° F. Noon, 79° F. 6 p. m., 67° F.; rainfall, .25 in.; partly cloudy.

June 5.—6 a. m., 65° F. Noon, 76° F. 6 p. m., 68° F.; clear; some beets out of the ground.

General remarks.—Somewhat of a crust formed over the seed, but the rain coming just as the beets were trying to get through so softened the crust as to allow them to come up easily.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 61° F. Noon, 69° F. 6 p. m., 64° F.; partly cloudy.

June 7.—6 a. m., 58° F. Noon, 77° F. 6 p. m., 60° F.; cloudy; beets out of ground; getting a good stand.

June 8.—6 a. m., 52° F. Noon. 65° F. 6 p. m., 60° F.; cloudy.

June 9.—6 a. m., 50° F. Noon, 54° F. 6 p. m., 53° F.; rainfall, 3.28 in.; cloudy.

June 10.—6 a. m., 53° F. Noon, 64° F. 6 p. m., 63° F.; rainfall, .07 in.; cloudy.

June 11.—6 a. m., 63° F. Noon, 75° F. 6 p. m., 66° F.; rainfall, .04 in.; partly cloudy.

June 12.—6 a. m., 62° F. Noon, 76° F. 6 p. m., 66° F.; clear.

General remarks.—The following is a list of our charges against the Department up to date: May 25, plowing (man and team), one-half day, $2; May 27, plowing, harrowing, etc., $4; May 28, measuring and making plot, two hours, 30 cents; May 28, sowing seed, eight hours, $1.20; June 11, repairing rain gauge, 10 cents.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 59° F. Noon, 77° F. 6 p. m., 58° F.; rainfall, .03 in.; partly cloudy.

June 14.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 62° F.; rainfall, .45 in.; partly cloudy.

June 15.—6 a. m., 53° F. Noon, 72° F. 6 p. m., 65° F.; partly cloudy.

June 16.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 66° F.; fair.

June 17.—6 a. m., 58° F. Noon, 83° F. 6 p. m., 72° F.; fair.

June 18.—6 a. m., 62° F. Noon, 77° F. 6 p. m., 72° F.; fair.

June 19.—6 a. m., 56° F. Noon, 88° F. 6 p. m., 74° F.; fair.

General remarks.—Beets not growing as well as should on account of cold weather. A small portion of plot was drowned out with the heavy rains, but will fill in by transplanting, so as to get an even stand.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 74° F. Noon, 70° F. 6 p. m., 68° F.; fair.

June 21.—6 a. m., 48° F. Noon, 59° F. 6 p. m., 67° F.; fair.

June 22.—6 a. m., 48° F. Noon, 76° F. 6 p. m., 65° F.; fair.

June 23.—6 a. m., 58° F. Noon, 82° F. 6 p. m., 80° F.; fair.

June 24.—6 a. m., 70° F. Noon, 85° F. 6 p. m., 80° F.; rainfall, .40 in.; partly cloudy.

June 25.—6 a. m., 72° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy.

June 26.—6 a. m., 67° F. Noon, 70° F. 6 p. m., 65° F.; fair.

General remarks.—Commenced putting on fertilizer on Friday, but had to stop on account of high wind.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 52° F. Noon, 65° F. 6 p. m., 60° F.; fair.

June 28.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 76° F.; fair.

June 29.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, 1.15 in.; cloudy.

June 30.—6 a. m., 66° F. Noon, 74° F. 6 p. m., 71° F.; fair.

July 1.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 78° F.; fair.

July 2.—6 a. m., 67° F. Noon, 82° F. 6 p. m., 75° F.; partly cloudy.

July 3.—6 a. m., 60° F. Noon, 88° F. 6 p. m., 84° F.; fair.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 78° F. Noon. 96° F. 6 p. m., 84° F.; clear.

July 5.—6 a. m., 78° F. Noon, 99° F. 6 p. m., 90° F.; clear.

July 6.—6 a. m., 80° F. Noon, 96° F. 6 p. m., 91° F.; clear.

July 7.—6 a. m., 78° F. Noon, 94° F. 6 p. m., 85° F.; clear.

July 8.—6 a. m., 81° F. Noon, 95° F. 6 p. m., 90° F.; clear.

July 9.—6 a. m., 79° F. Noon, 96° F. 6 p. m., 89° F.; clear.

July 10.—6 a. m., 80° F. Noon, 98° F. 6 p. m., 78° F.; clear.

General remarks.—Ground getting very dry and excessive heat causes beets to wilt very much, a few having died. Growing very well in general. Have not been able to transplant yet, on account of being too dry. July 9, spent three hours hoeing, 45 cents.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 74° F. Noon, 94° F. 6 p. m., 80° F.; rainfall, .20 in.; partly cloudy.

July 12.—6 a. m., 70° F. Noon, 84° F. 6 p. m., 74° F.; rainfall, .76 in.; cloudy.

July 13.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, 1.92 in.; cloudy.

July 14.—6 a. m., 63° F. Noon, 75° F. 6 p. m., 71° F.; partly cloudy.

July 15.—6 a. m., 58° F. Noon, 76° F. 6 p. m., 74° F.; clear.

July 16.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 85° F.; clear.

July 17.—6 a. m., 72° F. Noon, 82° F. 6 p. m., 74° F.; partly cloudy.

General remarks.—Growing finely. July 11, weeding and hoeing, six hours, 90 cents; July 16, weeding and hoeing, 12 hours, $1.80; July 17, weeding and hoeing, thirteen hours, $1.95.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 72° F. Noon, 88° F. 6 p. m., 82° F.; partly cloudy.

July 19.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 84° F.; rainfall, .02 in.; partly cloudy.

July 20.—6 a. m., 71° F. Noon, 92° F. 6 p. m., 85° F.; clear.

July 21.—6 a. m., 77° F. Noon, 91° F. 6 p. m., 84° F.; clear.

July 22.—6 a. m., 74° F. Noon, 77° F. 6 p. m., 73° F.; rainfall, 2.30 in.; partly cloudy.

July 23.—6 a. m., 70° F. Noon, 88° F. 6 p. m., 82° F.; partly cloudy.

July 24.—6 a. m., 73° F. Noon, 85° F. 6 p. m., 80° F.; clear.

General remarks.—The excessive rain having hindered us in hoeing and weeding, we now have to do considerable hand weeding. July 19, weeding, ten hours, $1.50; July 21, hoeing, ten hours, $1.50.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 72° F. Noon, 83° F. 6 p. m., 76° F.; rainfall, .15 in.; cloudy.

July 26.—6 a. m., 70° F. Noon, 76° F. 6 p. m., 68° F.; cloudy.

July 27.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 70° F.; cloudy.

July 28.—6 a. m., 65° F. Noon, 75° F. 6 p. m., 66° F.; rainfall, 1.18 in.; cloudy.

July 29.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, .20 in.; cloudy.

July 30.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, .10 in.; cloudy.

July 31.—6 a. m., 60° F. Noon, 73° F. 6 p. m., 68° F.; partly cloudy.

General remarks.—July 26, weeding, ten hours, $1.50; July 31, weeding, twenty hours, $3.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 56° F. Noon, 84° F. 6 p. m., 78° F.; rainfall, .15 in.; partly cloudy.

August 2.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 80° F.; clear.

August 3.—6 a. m., 74° F. Noon, 85° F. 6 p. m., 80° F.; clear.

August 4.—6 a. m., 76° F. Noon, 89° F. 6 p. m., 75° F.; clear.

August 5.—6 a. m., 60° F. Noon, 82° F. 6 p. m., 73° F.; clear.

August 6.—6 a. m., 56° F. Noon, 79° F. 6 p. m., 70° F.; partly cloudy.

August 7.—6 a. m., 61° F. Noon, 81° F. 6 p. m., 75° F.; partly cloudy.

General remarks.—August 2, hoeing, five hours, 75 cents; August 3, hoeing, five hours, 75 cents; August 5, hoeing, ten hours, $1.50; August 7, hoeing, five hours, 75 cents.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 62° F. Noon, 84° F. 6 p. m., 75° F.; clear.

August 9.—6 a. m., 64° F. Noon, 87° F. 6 p. m., 76° F.; partly cloudy.

August 10.—6 a. m., 63° F. Noon, 83° F. 6 p. m., 74° F.; cloudy.

August 11.—6 a. m., 67° F. Noon, 76° F. 6 p. m., 68° F.; partly cloudy.

August 12.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 62° F.; partly cloudy.

August 13.—6 a. m., 54° F. Noon, 70° F. 6 p. m., 62° F.; clear.

August 14.—6 a. m., 56° F. Noon, 90° F. 6 p. m., 80° F.; clear.

General remarks.—August 10, hoeing, eight hours, $1.20.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 73° F.; rainfall, .11 in.; partly cloudy.

August 16.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 72° F.; rainfall, .06 in.; partly cloudy.

August 17.—6 a. m., 60° F. Noon, 68° F. 6 p. m., 62° F.; rainfall, .05 in.; partly cloudy.

August 18.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 64° F.; partly cloudy.

August 19.—6 a. m., 55° F. Noon, 86° F. 6 p. m., 65° F.; rainfall, .30 in.; partly cloudy.

August 20.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 60° F.; partly cloudy.

August 21.—6 a. m., 50° F. Noon, 78° F. 6 p. m., 60° F.; partly cloudy.

General remarks.—August 16, hoeing, sixteen hours, $2.40; August 17, hoeing, twenty hours, $3; August 18, hoeing, twenty hours, $3; August 19, hoeing, four hours, 60 cents.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 78° F. Noon, 81° F. 6 p. m., 65° F.; partly cloudy.

August 23.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 70° F.; rainfall, 1.30 in.; partly cloudy.

August 24.—6 a. m., 62° F. Noon, 78° F. 6 p. m., 68° F.; rainfall, .05 in.; cloudy.

August 25.—6 a. m., 58° F. Noon, 75° F. 6 p. m., 63° F.; partly cloudy.

August 26.—6 a. m., 56° F. Noon, 69° F. 6 p. m., 61° F.; fair.

August 27.—6 a. m., 54° F. Noon, 83° F. 6 p. m., 76° F.; partly cloudy.

August 28.—6 a. m., 58° F. Noon, 79° F. 6 p. m., 60° F.; clear.

General remarks.—August 23, hoeing, three hours, 45 cents.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 63° F. Noon, 87° F. 6 p. m., 76° F.; clear.

August 30.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 69° F.; clear.

August 31.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 68° F.; clear.

September 1.—6 a. m., 55° F. Noon, 80° F. 6 p. m., 70° F.; partly cloudy.

September 2.—6 a.m., 60° F. Noon, 69° F. 6 p.m., 65° F.; rainfall, .55 in.; partly cloudy.

September 3.—6 a. m., 55° F. Noon, 73° F. 6 p. m., 68° F.; clear.

September 4.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 66° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 65° F. Noon, 89° F. 6 p. m., 76° F.; clear.

September 6.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 79° F.; clear.

September 7.—6 a. m., 63° F. Noon, 90° F. 6 p. m., 82° F.; clear.

September 8.—6 a. m., 65° F. Noon, 87° F. 6 p. m., 76° F.; clear.

September 9.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 75° F.; partly cloudy.

September 10.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 68° F.; partly cloudy.

September 11.—6 a. m., 65° F. Noon, 88° F. 6 p. m., 81° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 65° F. Noon, 86° F. 6 p. m., 78° F.; partly cloudy.

September 13.—6 a. m., 64° F. Noon, 82° F. 6 p. m., 73° F.; rainfall, .16 in.; cloudy.

September 14.—6 a. m., 58° F. Noon, 75° F. 6 p. m., 67° F.; clear.

September 15.—6 a. m., 53° F. Noon, 79° F. 6 p. m., 68° F.; clear.

September 16.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 66° F.; partly cloudy.

September 17.—6 a. m., 54° F. Noon, 73° F. 6 p. m., 64° F.; partly cloudy.

September 18.—6 a. m., 52° F. Noon, 78° F. 6 p. m., 65° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 50° F. Noon, 79° F. 6 p. m., 67° F.; partly cloudy.

September 20.—6 a. m., 60° F. Noon, 67° F. 6 p. m., 63° F.; rainfall, .78 in.; cloudy.

September 21.—6 a. m., 51° F. Noon, 64° F. 6 p. m., 52° F.; partly cloudy.

September 22.—6 a. m., 34° F. Noon, 66° F. 6 p. m., 50° F.; clear.

September 23.—6 a. m., 45° F. Noon, 62° F. 6 p. m., 57° F.; cloudy.

September 24.—6 a. m., 53° F. Noon, 65° F. 6 p. m., 62° F.; rainfall, .79 in.; cloudy.

September 25.—6 a. m., 48° F. Noon, 78° F. 6 p. m., 69° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 55° F. Noon, 76° F. 6 p. m., 66° F.; rainfall, .11 in.; partly cloudy.

September 27.—6 a. m., 52° F. Noon, 56° F. 6 p. m., 46° F.; partly cloudy.

September 28.—6 a. m., 36° F. Noon, 54° F. 6 p. m., 48° F.; clear.

September 29.—6 a. m., 40° F. Noon, 62° F. 6 p. m., 55° F.; clear.

September 30.—6 a. m., 48° F. Noon, 78° F. 6 p. m., 60° F.; clear.

October 1.—6 a. m., 50° F. Noon, 80° F. 6 p. m., 68° F.; clear.

October 2.—6 a. m., 44° F. Noon, 76° F. 6 p. m., 52° F.; clear.

General remarks.—Beets are still growing. Some begin to show signs of ripening. In my estimation they should be harvested about the middle of this present month. Owing to the excessively wet season, only about one-fourth of the plot will yield a fair crop.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 31° F. Noon, 77° F. 6 p. m., 53° F.; clear.

October 4.—6 a. m., 31° F. Noon, 75° F. 6 p. m., 56° F.; clear.

October 5.—6 a. m., 34° F. Noon, 80° F. 6 p. m., 64° F.; clear.

October 6.—6 a. m., 41° F. Noon, 67° F. 6 p. m., 58° F.; partly cloudy.

October 7.—6 a. m., 48° F. Noon, 61° F.; 6 p. m., 52° F.; rainfall, .09 in.; cloudy.

October 8.—6 a. m., 40° F. Noon, 60° F. 6 p. m.. 53° F.; partly cloudy.

October 9.—6 a. m., 49° F. Noon, 63° F. 6 p. m., 50° F.; partly cloudy.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 30° F. Noon, 62° F. 6 p. m., 50° F.; partly cloudy.

October 11.—6 a. m., 40° F. Noon, 73° F. 6 p. m., 62° F.; partly cloudy.

October 12.—6 a. m., 54° F. Noon, 75° F. 6 p. m., 56° F.; rainfall, 1.04 in.; cloudy.

October 13.—6 a. m., 48° F. Noon. 62° F. 6 p. m., 55° F.; clear.

October 14.—6 a. m., 43° F. Noon, 68° F. 6 p. m., 53° F.; clear.

October 15.—6 a. m., 57° F. Noon, 85° F. 6 p. m., 74° F.; clear.

October 16.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 78° F.; partly cloudy.

General remarks.—Beets ripening rapidly; in our estimation should be harvested the coming week.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 41° F. Noon, 58° F. 6 p. m., 52° F.; partly cloudy.
October 18.—6 a. m., 38° F. Noon, 62° F. 6 p. m., 55° F.; partly cloudy.
October 19.—6 a. m., 35° F. Noon, 73° F. 6 p. m., 62° F.; clear.
October 20.—6 a. m., 32° F. Noon, 69° F. 6 p. m., 51° F.; clear.
October 21.—6 a. m., 44° F. Noon, 76° F. 6 p. m., 57° F.; partly cloudy.
October 22.—6 a. m., 46° F. Noon, 65° F. 6 p. m., 56° F.; partly cloudy.
October 23.—6 a. m., 33° F. Noon, 59° F. 6 p. m., 48° F.; partly cloudy.

General remarks.—The beets being fit to harvest, began to harvest same on the 22d. Owing to the excessively hard rains that we have had, we had to dig them all, the ground being so compact that we could not pull them. Having planted them on a very low piece of land, they were flooded several times during the season and mostly drowned out, only about one-fourth of plot being worth harvesting. From one-half of the quarter acre planted to the Vilmorin we gathered 1,125 pounds, being at the rate of four and one-half tons to the acre. Had we planted them on higher ground would undoubtedly had a big yield.

FREDERICK & SEVERSON,
Experimenters.

ALTAMONT, N. Y., *October* 29, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 149 days, making 21 2-7 weeks; that the whole amount of rainfall in the whole time was 18.94; that the average rainfall per month was 3.81; that the average rainfall per week was .889; and that the average rainfall per day was .127; that the number of days on which the sun shone was 65; that the number of cloudy days was 51; that the number of days on which it rained was 33; the kind of soil on which this patch of beets was raised was clay loam; the amount of beets raised upon the patch would indicate that that soil would raise 4.50 tons of Vilmorin Improved per acre; the analysis of the Vilmorin Improved shows 15.14 percentage of sugar. This would indicate that that soil would raise beets that would produce 1362.60 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 2.

REPORT FOR WEEK ENDING JUNE 5, 1897.

May 31, June 1, 2, 3, 4 and 5, no rainfall.

General remarks.—Beets sown upon light sandy soil, upon which were raised crops of potatoes in 1896;heavily manured with stable manure at that time. Plowed June 1st nine inches deep and one-quarter acre subsoiled about ten inches below the plowing; thoroughly harrowed, then rolled. Beets sown June 2d and again rolled for the purpose of ensuring germination. Rows twenty-four inches apart and sown in such a manner as to extend across both the portion of field subsoiled and the one not so treated. Temperature very nearly 60° F.; no rainfall at time of sowing or during the week.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 7.—6 a. m., 61° F. Noon, 63° F. 6 p. m., 55° F.; rainfall, .80 in.; cloudy; heavy rain.

June 8.—6 a. m., 53° F. Noon, 54° F. 6 p. m., 52° F.; rainfall, .57 in.; cloudy.

June 9.—6 a. m., 51° F. Noon, 64° F. 6 p. m., 54° F.; partly cloudy; beets appearing above ground.

June 10.—6 a. m., 65° F. Noon, 67° F. 6 p. m., 69° F.; partly cloudy.

June 11.—6 a. m., 65° F. Noon, 68° F. 6 p. m., 65° F.; partly cloudy.

June 12.—6 a. m., 59° F. Noon, 73° F. 6 p. m., 70° F.; partly cloudy.

June 13.—6 a. m., 71° F. Noon, 70° F. 6 p. m., 65° F.; clear; beets one-half inch above ground.

General remarks.—The expense and date as follows: June 1, plowing one-half acre, $1; subsoiling one-quarter acre, 75 cents; harrowing, 75 cents; rolling, 25 cents; sowing fertilizer, 20 cents; sowing seed, 35 cents; rolling, 25 cents; total, $3.55.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 71° F. Noon, 70° F. 6 p. m., 65° F.; cloudy forenoon, clear afternoon; rainfall, .12 in.

June 14.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 68° F.; clear.

June 15.—6 a. m., 67° F. Noon, 73° F. 6 p. m., 66° F.; cloudy forenoon; clear afternoon.

June 16.—6 a. m., 64° F. Noon, 72° F. 6 p. m., 71° F.; cloudy forenoon; clear afternoon; rainfall, .02 in.

June 17.—6 a. m., 55° F. Noon, 64° F. 6 p. m., 71° F.; rainfall, .18 in.; cloudy; weather fine for growth.

June 18.—6 a. m., 55° F. Noon, 63° F. 6 p. m., 61° F.; rainfall, .04 in.; clear; beets about one inch above ground.

June 19.—6 a. m., 62° F. Noon, 60° F. 6 p. m., 80° F.; clear forenoon; cloudy afternoon.

General remarks.—Hoeing and loosening earth by rows, $2.25.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 55° F. Noon, 72° F. 6 p. m., 56° F.; rainfall, .28 in.

June 21.—6 a. m., 38° F. Noon, 70° F. 6 p. m., 53° F.

June 22.—6 a. m., 51° F. Noon, 65° F. 6 p. m., 55° F.

June 23.—6 a. m., 58° F. Noon, 83° F. 6 p. m., 76° F.

June 24.—6 a. m., 68° F. Noon, 85° F. 6 p. m., 78° F.

June 25.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 68° F.

June 26.—6 a. m., 61° F. Noon, 75° F. 6 p. m., 66° F.; fourth leaf formed on beets.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 43° F. Noon, 78° F. 6 p. m., 55° F.; clear.

June 28.—6 a. m., 42° F. Noon, 84° F. 6 p. m., 62° F.; partly cloudy.

June 29.—6 a. m., 62° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .13 in.; cloudy.

June 30.—6 a. m., 64° F. Noon, 79° F. 6 p. m., 72° F.; rainfall, .14 in.; clear forenoon; cloudy afternoon.

July 1.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 72° F.; clear.

July 2.—6 a. m., 62° F. Noon, 88° F. 6 p. m., 82° F.; clear.

July 3.—6 a. m., 62° F. Noon, 96° F. 6 p. m., 86° F.; clear; very dry; beets making slow growth.

General remarks.—June 28, cultivating, 40 cents; June 29, hoeing, $1.25; June 30, hoeing, $1.25; July 1, hoeing, $1.25.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 72° F. Noon, 96° F. 6 p. m., 86° F.; partly cloudy.

July 5.—6 a. m., 75° F. Noon, 96° F. 6 p. m., 80° F.; rainfall, .05 in.; partly cloudy.

July 6.—6 a. m., 70° F. Noon, 86° F. 6 p. m., 80° F.; partly cloudy.

July 7.—6 a. m., 60° F. Noon, 96° F. 6 p. m., 78° F.; clear.

July 8.—6 a. m., 68° F. Noon, 96° F. 6 p. m., 78° F.; rainfall, .13 in.; partly cloudy.

July 9.—6 a. m., 74° F. Noon, 98° F. 6 p. m., 89° F.; clear.

July 10.—6 a. m., 74° F. Noon, 98° F. 6 p. m., 88° F.; partly cloudy; beets two to three inches in height.

General remarks.—Hoeing five days, $6.25.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 70° F. Noon, 96° F. 6 p. m., 70° F.; rainfall, 1.95 in.; strip about four feet wide across field washed out by rain.

July 12.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 70° F.; rainfall, .35 in.

July 13.—6 a. m., 56° F. Noon, 81° F. 6 p. m., 68° F.

July 14.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 68° F.

July 15.—6 a. m., 58° F. Noon, 75° F. 6 p. m., 70° F.

July 16.—6 a. m., 57° F. Noon, 85° F. 6 p. m., 80° F.

July 17.—6 a. m., 68° F. Noon, 76° F. 6 p. m., 77° F.

General remarks.—Thinning and hoeing three and one-quarter days, $4.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 70° F. Noon, 70° F. 6 p. m., 68° F.; rainfall, .25 in.; cloudy.

July 19.—6 a. m., 66° F. Noon, 77° F. 6 p. m., 84° F.; rainfall, .75 in.; cloudy.

July 20.—6 a. m., 70° F. Noon, 86° F. 6 p. m., 68° F.; rainfall, .40 in.; cloudy.

July 21.—6 a. m., 67° F. Noon, 83° F. 6 p. m., 72° F.; rainfall, .23 in.; cloudy.

July 22.—6 a. m., 62° F. Noon, 81° F. 6 p. m., 75° F.; rainfall, .05 in.; cloudy.

July 23.—6 a. m., 66° F. Noon, 83° F. 6 p. m., 70° F.; rainfall, .45 in.; cloudy.

July 24.—6 a. m., 65° F. Noon, 74° F. 6 p. m., 70° F.; rainfall, .02 in.; cloudy.

General remarks.—Cultivating, 80 cents.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 68° F. Noon, 87° F. 6 p. m., 70° F.

July 26.—6 a. m., 70° F. Noon, 88° F. 6 p. m., 72° F.

July 27.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 72° F.; rainfall, .12 in.

July 28.—6 a. m., 66° F. Noon, 74° F. 6 p. m., 72° F.; rainfall, .19 in.

July 29.—6 a. m., 62° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .15 in.

July 30.—6 a. m., 64° F. Noon, 80° F. 6 p. m., 72° F.

July 31.—6 a. m., 66° F. Noon, 79° F. 6 p. m., 77° F.; rainfall, .21 in.

General remarks.—When the beets were nicely out of the ground large strips were destroyed by some kind of insect, leaving a very poor stand at present.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 66° F. Noon, 82° F. 6 p. m., 77° F.; clear.

August 2.—6 a. m., 66° F. Noon, 83° F. 6 p. m., 75° F.; clear.

August 3.—6 a. m., 63° F. Noon, 87° F. 6 p. m., 83° F.; partly cloudy.

August 4.—6 a. m., 63° F. Noon, 86° F. 6 p. m., 78° F.; partly cloudy.

August 5.—6 a. m., 65° F. Noon, 74° F. 6 p. m., 69° F.; rainfall, .08 in.; partly cloudy.

August 6.—6 a. m., 49° F. Noon, 78° F. 6 p. m., 74° F.; clear.

August 7.—6 a. m., 62° F. Noon, 87° F. 6 p. m., 78° F.; clear.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 60° F. Noon, 77° F. 6 p. m., 68° F.; rainfall, .08 in.; partly cloudy.

August 9.—6 a. m., 62° F. Noon, 83° F. 6 p. m., 78° F.; partly cloudy.

August 10.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .75 in.; partly cloudy.

August 11.—6 a. m., 62° F. Noon, 79° F. 6 p. m., 72° F.; rainfall, .08 in.; partly cloudy.

August 12.—6 a. m., 63° F. Noon, 78° F. 6 p. m., 66° F.; rainfall, .20 in.; partly cloudy.

August 13.—6 a. m., 56° F. Noon, 75° F. 6 p. m., 73° F.; rainfall, .07 in.; partly cloudy.

August 14.—6 a. m., 54° F. Noon, 83° F. 6 p. m., 80° F.; clear.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m , 63° F. Noon, 80° F. 6 p. m., 73° F.; rainfall, .05 in.; partly cloudy.

August 16.—6 a. m., 62° F. Noon, 75° F. 6 p. m., 64° F.; rainfall, .98 in.; cloudy.

August 17.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 65° F.; rainfall, .02 in.; clear.

August 18.—6 a. m., 64° F. Noon, 82° F. 6 p. m., 79° F.; rainfall, .23 in.; partly cloudy.

August 19.—6 a. m., 62° F. Noon, 69° F. 6 p. m., 64° F.; rainfall, .27 in.; partly cloudy.

August 20.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 64° F.; rainfall, .04 in.; partly cloudy.

August 21.—6 a. m., 48° F. Noon, 74° F. 6 p. m., 74° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 48° F. Noon, 78° F. 6 p. m., 63° F.; clear.

August 23.—6 a. m., 62° F. Noon, 79° F. 6 p. m., 71° F.; clear.

August 24.—6 a. m., 59° F. Noon, 79° F. 6 p. m., 69° F.; rainfall, .03 in.; partly cloudy.

August 25.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 68° F.; rainfall, .15 in.; partly cloudy.

August 26.—6 a. m., 46° F. Noon, 68° F. 6 p. m., 64° F.; clear.

August 27.—6 a. m., 50° F. Noon, 80° F. 6 p. m., 70° F.; clear.

August 28.—6 a. m., 59° F. Noon, 75° F. 6 p. m., 72° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 52° F. Noon, 81° F. 6 p. m., 77° F.; cloudy.

August 30.—6 a. m., 55° F. Noon, 70° F. 6 p. m., 67° F.; rainfall, .48 in.; partly cloudy.

August 31.—6 a. m., 48° F. Noon, 74° F. 6 p. m., 65° F.; clear.

September 1.—6 a. m., 59° F. Noon, 65° F. 6 p. m., 38° F.; clear.

September 2.—6 a. m., 64° F. Noon, 71° F. 6 p. m., 69° F.; rainfall, .22 in.; partly cloudy.

September 3.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 67° F.; clear.

September 4.—6 a. m., 50° F. Noon, 67° F. 6 p. m., 64° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 47° F. Noon, 80° F. 6 p. m., 74° F.; clear.

September 6.—6 a. m., 55° F. Noon, 83° F. 6 p. m., 73° F.; clear.

September 7.—6 a. m., 67° F. Noon, 87° F. 6 p. m., 70° F.; clear.

September 8.—6 a. m., 57° F. Noon, 86° F. 6 p. m., 76° F.; clear.

September 9.—6 a. m., 58° F. Noon, 85° F. 6 p. m., 80° F.; clear.

September 10.—6 a. m., 61° F. Noon, 91° F. 6 p. m., 78° F.; clear.

September 11.—6 a. m., 58° F. Noon, 82° F. 6 p. m., 73° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 79° F.; partly cloudy.

September 13.—6 a. m., 69° F. Noon, 86° F. 6 p. m., 74° F.; rainfall, .03 in.; partly cloudy.

September 14.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 69° F.; clear.

September 15.—6 a. m., 44° F. Noon, 82° F. 6 p. m., 68° F.; clear.

September 16.—6 a. m., 54° F. Noon, 92° F. 6 p. m., 81° F.; rainfall, .34 in.; partly cloudy.

September 17.—6 a. m., 64° F. Noon, 69° F. 6 p. m., 60° F.; partly cloudy.

September 18.—6 a. m., 39° F. Noon, 69° F. 6 p. m., 61° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 59° F. Noon, 62° F. 6 p. m., 59° F.; clear.

September 20.—6 a. m., 49° F. Noon, 51° F. 6 p. m., 48° F.; rainfall, .30 in.; partly cloudy.

September 21.—6 a. m., 30° F. Noon, 58° F. 6 p. m., 57° F.; clear.

September 22.—6 a. m., 31° F. Noon, 67° F. 6 p. m., 58° F.; partly cloudy.

September 23.—6 a. m., 42° F. Noon, 62° F. 6 p. m., 55° F.; rainfall, .02 in.; partly cloudy.

September 24.—6 a. m., 52° F. Noon, 66° F. 6 p. m., 63° F.; rainfall, .01 in.; partly cloudy.

September 25.—6 a. m., 37° F. Noon, 72° F. 6 p. m., 62° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 58° F. Noon, 76° F. 6 p. m., 61° F.; clear.

September 27.—6 a. m., 50° F. Noon, 56° F. 6 p. m., 54° F.; clear.

September 28.—6 a. m., 30° F. Noon, 63° F. 6 p. m., 56° F.; clear.

September 29.—6 a. m., 32° F. Noon, 71° F. 6 p. m., 64° F.; clear.

September 30.—6 a. m., 41° F. Noon, 80° F. 6 p. m., 65° F.; clear.

October 1.—6 a. m., 43° F. Noon, 77° F. 6 p. m., 64° F.; clear.

October 2.—6 a. m., 48° F. Noon, 77° F. 6 p. m., 62° F.; partly cloudy.

General remarks.—Beets show a few dead leaves; little or no second growth. Would probably be best to harvest about October 15th to October 20th.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 62° F.; clear.

October 4.—6 a. m., 28° F. Noon, 69° F. 6 p. m., 55° F.; clear.

October 5.—6 a. m., 34° F. Noon, 75° F. 6 p. m., 58° F.; clear.

October 6.—6 a. m., 50° F. Noon, 63° F. 6 p. m., 54° F.; partly cloudy.

October 7.—6 a. m., 48° F. Noon, 49° F. 6 p. m., 43° F.; rainfall, .15 in.; cloudy.

October 8.—6 a. m., 40° F. Noon, 63° F. 6 p. m., 49° F.; partly cloudy.

October 9.—6 a. m., 47° F. Noon, 57° F. 6 p. m., 47° F.; clear.

General remarks.—Beets show quite a large number dead leaves and many becoming lighter in color. Very little second growth appearing.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 22° F. Noon, 63° F. 6 p. m., 45° F.; clear.

October 11.—6 a. m., 61° F. Noon, 74° F. 6 p. m., 48° F.; rainfall, .21 in.; partly cloudy.

October 12.—6 a. m., 63° F. Noon, 67° F. 6 p. m., 57° F.; clear.

October 13.—6 a. m., 55° F. Noon, 69° F. 6 p. m., 58° F.; clear.

October 14.—6 a. m., 63° F. Noon, 72° F. 6 p. m., 57° F.; clear.

October 15.—6 a. m., 67° F. Noon, 83° F. 6 p. m., 70° F.; clear.

October 16.—6 a. m., 61° F. Noon, 75° F. 6 p. m., 56° F.; partly cloudy.

General remarks.—A portion of row 50 feet long of each variety of beets harvested October 15th, was taken, and 50 pounds of each forwarded to Dr. W. H. Jordan, Director of Geneva Agricultural Experiment Station, October 21st. Yield of Vilmorin Improved, 3.65 tons; of Klein Wanzlebener, 3.20 tons. Beets grown upon subsoiled portion of plat were much smoother, longer, and gave about 20 per cent. more yield. Cost of harvesting, two and seven-tenths days, $3.38.

J. P. CLARK,
Experimenter.

FALCONER, N. Y., *October* 25, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 139 days, making 19 6-7 weeks; that the whole amount of rainfall in the whole time was 12.37; that the average rainfall per month was 2.67; that the average rainfall per week was .623; and that the average rainfall per day was .089; that the number of days on which the sun shone was 52; that the number of cloudy days was 22; that the number of days on which it rained was 47; the kind of soil on which this patch of beets was raised was light sandy loam; the amount of beets raised upon the patch would indicate that that soil would raise 12.80 tons of Klein Wanzlebener per acre, and 14.60 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 15 per cent. of sugar and the Vilmorin Improved 14.60 percentage of sugar. This would indicate that that soil would raise beets that would produce 3840 pounds of sugar per acre from the Klein Wanzlebener and 4263.20 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 3.

REPORT FOR WEEK ENDING JUNE 5, 1897.

June 2.—6 a. m., 65° F. Noon, 70° F. 6 p. m., 68° F.; partly cloudy; planted first plot one-quarter acre.

June 3.—Noon, 70° F.; light showers about one-half hour; cloudy.

June 4.—6 a. m., 62° F. Noon, 68° F.; forenoon cloudy; middle day sun out; afternoon cloudy and some wind.

June 5.—6 a. m., 68° F. Noon, 70° F.; nice sunny day; no wind.

General remarks.—The above plot of one-quarter acre is located right in the heart of the town. Monday I will plant one-half acre more at the south end of the town. The climate back over the hills is very different than down along the lake shore, but the soil and condition of land and climate I think far better adapted for raising roots than down along the lake, although there are places on most all farms that would make good beet ground, and if you are so disposed I will test the two localities and make double reports. If you wish only the one plot of one-half acre, I will give the south plot for your control as that is the section that will no doubt produce the largest quantity of "Sugar Beets" and more available land in this part of the town. The one-quarter acre is in high state of cultivation and will no doubt produce a mammoth crop. The one-half acre to go out Monday is on my 300 acre farm and only a fair average piece of ground, but good condition for beets. Last year's crop, corn and turnips; very loose mellow soil; have 50 to 100 acres on this farm, that would, I think, be first-class beet ground; there are a large number of farms adjoining of similar soil.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 65° F.; fair.

June 7.—6 a. m., 60, F.; cloudy. Noon, 65° F.; rainfall, .26 in.; rainy from 10 to 1 a. m. and 2 to 6 p. m.; just coming up out of ground. 6 p. m., 62° F.

June 8.—6 a. m., 60° F. Noon, 58° F. 6 p. m., 55° F.; rainfall, .52 in.; cloudy forenoon; fine mist rain afternoon; rained all night; additional new sprouts showing to-day; last night's rain and afternoon mist sprouting seeds nicely.

June 9.—6 a. m., 53° F.; mist and fog. Noon, 58° F.; cloudy. 6 p. m., 63° F.; cloudy, with barometer just starting towards fair this afternoon; outline of rows to-day show more new sprouts.

June 10.—6 a. m., 68° F. Noon, 75° F. 6 p. m., 70° F.; cloudy; sun out about one hour during day; discarded cup and placed water gauge on plot.

June 11.—6 a. m., 68° F. Noon, 78° F.; bright sunny day.

June 12.—6 a. m., 78° to 80° F.; cloudy; part day sun out.

General remarks.—This sheet, also the previous sheet, you can destroy, as your letter directs to have the plot all in one place; so next Monday, June 21st, you will get the first report on the one-half acre plot, and on this plot no further record will be kept, more than the final testing of the beets.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 12.—Noon, 74° F. 6 p. m., 60° F.; partly cloudy; planted seeds to-day.

June 13.—6 a. m., 62° F. Noon, 64° F. 6 p. m., 64° F.; partly cloudy; phosphate drilled with seeds.

June 14.—6 a. m., 64° F. Noon, 76° F.; clear. 6 p. m., 72° F.; partly cloudy; used a grain drill, stopping up every second opening, making the rows about two feet apart.

June 15.—6 a. m., 70° F. Noon, 70° F. 6 p. m., 72° F.; partly cloudy.

June 16.—6 a. m., 58° F. Noon, 78° F.; partly cloudy. 6 p. m., 66° F.; cloudy.

June 17.—6 a. m., 56° F. Noon, 72° F. 6 p. m., 64° F.; cloudy.

June 18.—6 a. m., 54° F. Noon, 68° F.; partly cloudy. 6 p. m., 78° F.; clear.

June 19.—6 a. m., 58° F. Noon, 82° F. 6 p. m., 68° F.; cloudy.

General remarks.—This one-half acre plot is situated in the southwest part of the township of Westfield on a large 300 acre farm of ordinary farm land upon which corn was raised last year. This farm is in a dairy section and large quantities of potatoes, turnips and carrots are raised for stock purposes, and there is considerable available land in this section suitable for the growing of roots. I have also several other small plots on other lands and in different parts of the town testing in a private way. This plot the land was plowed deep, and manured before being plowed, dragged thoroughly, rolled and drilled with phosphate. Two days plowing and preparing land with team, $5. I will make the price of man and team work $2.50 per day and trust this will be satisfactory.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 54° F. Noon. 68° F. 6 p. m., 58° F.; rainfall, .05 in.; partly cloudy.

June 21.—6 a. m., 44° F. Noon, 68° F.; partly cloudy. 6 p. m., 58° F.; clear.

June 22.—6 a. m., 44° F.; partly cloudy. Noon, 72° F. 6 p. m., 68° F.; clear.

June 23.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 82° F.; partly cloudy.

June 24.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 76° F.; partly cloudy; beets just beginning to come up.

June 25.—6 a. m., 64° F.; cloudy. Noon, 74° F.; clear. 6 p. m., 64° F.; partly cloudy.

June 26.—6 a. m., 51° F. Noon, 62° F.; partly cloudy. 6 p. m., 65° F.; clear.

General remarks.—You will see that I am a little behind sending reports on Monday as required, this farm is eight miles from my office here in town and the report is sent to me first from this farm. The lack of rain has made beets slow in starting. My town plots put in before your seed for the above plot by about two weeks are looking finely, and if we have a rain within a few days this plot will go right along very rapidly as roots do finely on this farm. The variation of the temperature varies at noon some days considerable as you will see. The thermometer is hung on the "rain gauge" post and out in the sun when not cloudy.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 54° F. Noon, 73° F. 6 p. m., 72° F.; clear.

June 28.—6 a. m., 52° F.; cloudy. Noon, 76° F.; partly cloudy. 6 p. m., 70° F.; cloudy.

June 29.—6 a. m., 60° F. Noon, 66° F. 6 p. m., 70° F.; rainfall, .10 in.; cloudy.

June 30.—6 a. m., 66° F.; cloudy. Noon, 72° F. 6 p. m., 74° F.; rainfall, .30 in.; partly cloudy.

July 1.—6 a. m., 64° F. Noon, 88° F. 6 p. m., 68° F.; partly cloudy.

July 2.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 74° F.; partly cloudy.

July 3.—6 a. m., 69° F.; clear. Noon, 92° F. 6 p. m., 90° F.; partly cloudy.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 72° F. Noon, 98° F. 6 p. m., 78° F.; rainfall, .10 in.; partly cloudy.

July 5.—6 a. m., 72° F. Noon, 100° F. 6 p. m., 76° F.; partly cloudy; plants coming up very slow.

July 6.—6 a. m., 68, F.; cloudy. Noon, 86° F.; clear. 6 p. m., 76° F.; rainfall, .05 in.; cloudy.

July 7.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 78° F.; clear.

July 8.—6 a. m., 70° F.; clear. Noon, 90° F. 6 p. m., 78° F.; partly cloudy.

July 9.—6 a. m., 70° F. Noon, 94° F. 6 p. m., 98° F.; partly cloudy.

July 10.—6 a. m., 72° F.; partly cloudy. Noon, 86° F.; clear. 6 p. m., 86° F.; partly cloudy; do not seem to improve much to-day; and hot.

General remarks.—The dry weather and hot days seem to stop the advance in growth and unless we get more rainfall soon I am afraid these beets will not do very well. They were put out I think a month later than they should have been. Arrangements were made so late that it is rather against a crop unless frequent rains and conditions are very favorable. The sugar beet seed put in about two weeks earlier on my quarter acre lot, are doing finely, as they got a good start before the hot weather came on.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 66° F.;rainfall, 1 in.; partly cloudy.

July 12.—6 a. m., 60° F.; cloudy. Noon, 68° F.; partly cloudy. 6 p. m., 74° F.; rainfall, .45 in.; clear.

July 13.—6 a. m., 58° F.; clear. Noon, 74° F.; partly cloudy. 6 p. m., 68° F.; rainfall, .65 in.; cloudy.

July 14.—6 a. m., 55° F.; clear. Noon, 70° F.; partly cloudy. 6 p. m., 55° F.; rainfall, 1.45 in.; cloudy; about ruined the beets, also damaged other crops in its course; terrible hail storm occurred.

July 15.—6 a. m., 66° F. Noon, 76° F.; partly cloudy. 6 p. m., 86° F.; clear.

July 16.—6 a. m., 64° F.; clear. Noon, 80° F. 6 p. m., 70° F.; partly cloudy.

July 17.—6 a. m., 64° F.; partly cloudy. Noon, 72° F.; cloudy. 6 p. m., 66° F.; rainfall, .48 in.; partly cloudy.

General remarks.—The past week has been disasterous to the beet plot which was in a backward condition as explained to you in last report. The hail storm took a course of about one mile in width and eight miles long, reaching from the south part of the town to nearly the Lake " Erie " on the north, and injured the crops having wide leaves, such as corn, beets, turnips, and quite a damage done to the " grape " crop where this electrical storm made its course but was so narrow and short at the north but few vineyards suffered by being in its course. This was the worst hail storm this time of year that old pioneer farmers ever knew in this locality.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 66° F.; cloudy. Noon, 70° F.; partly cloudy. 6 p. m., 64° F.; rainfall, .15 in.; cloudy.

July 19.—6 a. m., 64° F.; cloudy. Noon, 68° F. 6 p. m., 60° F.; rainfall, .25 in.; partly cloudy; beets are a failure.

July 20.—6 a. m., 66° F.; cloudy. Noon, 84° F. 6 p. m., 65° F.; rainfall, 2.20 in.; partly cloudy.

July 21.—6 a. m., 68° F.; clear. Noon, 85° F. 6 p. m., 64° F.; partly cloudy.

July 22.—6 a. m., 69° F.; clear. Noon, 92° F.; partly cloudy. 6 p. m., 63° F.; rainfall, .55 in.; cloudy.

July 23.—6 a. m., 60° F.; partly cloudy. Noon, 64° F. 6 p. m., 64° F.; rainfall .10 in.; cloudy.

July 24.—6 a. m., 62° F. Noon, 64° F. 6 p. m., 61° F.; cloudy.

General remarks.—I wrote you fully last week in regard to this patch and asked you if I could not substitute the plots I first put out for you, which are in first-class condition and probably as thrifty beets as can be found in the State put out at the same time. You will remember I put out two one-quarter acre lots and at your request or wish I started out another one of one-half acre, as you stated you preferred to have it in all one place. These last ones were put out too late and in too dry a time and started very poorly and seemed to dry up, and quite a lot of seed never showed above ground.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 66° F.; cloudy. Noon, 80° F. 6 p. m., 65° F.; partly cloudy.

July 26.—6 a. m., 62° F.; partly cloudy. Noon, 80° F. 6 p. m., 64° F.; rainfall, .15 in.; cloudy.

July 27.—6 a. m., 62° F.; rainfall, .15 in.; cloudy. Noon, 66° F.; partly cloudy. 6 p. m., 64° F.; rainfall, .45 in.; cloudy.

July 28.—6 a. m., 62° F.; rainfall, .20 in. Noon, 66° F.; cloudy. 6 p. m., 64° F.; rainfall, .10 in.; partly cloudy.

July 29.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, .90 in.; cloudy.

July 30.—6 a. m., 58° F.; partly cloudy. Noon, 83° F.; cloudy. 6 p. m., 74° F.; rainfall, .30 in.; partly cloudy.

July 31.—6 a. m., 62° F.; clear. Noon, 82° F. 6 p. m., 72° F.; rainfall .37 in.; cloudy.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 76° F.; clear

August 2.—6 a. m., 78° F. Noon, 82° F. 6 p. m., 76° F.; clear.

August 3.—6 a. m., 70° F.; clear. Noon, 88° F.; cloudy. 6 p. m., 69° F.; partly cloudy.

August 4.—6 a. m., 64° F.; clear. Noon, 92° F.; partly cloudy. 6 p. m., 62° F.; cloudy.

August 5.—6 a. m., 64° F.; partly cloudy. Noon, 70° F. 6 p. m., 66° F.; rainfall, .20 in.; clear.

August 6.—6 a. m., 62° F. Noon, 70° F. 6 p. m., 60° F.; clear.

August 7.—6 a. m., 60° F.; clear. Noon, 80° F. 6 p. m., 66° F.; partly cloudy.

SUGAR BEET CROP REPORT FOR WEEK ENDING AUGUST 15, 1897.

August 9.—6 a. m., 70° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy.

August 10.—6 a. m., 70° F. Noon, 72° F. 6 p. m., 75° F.; rainfall, .15 in.; partly cloudy.

August 11.—6 a. m., 70° F.; cloudy. Noon, 75° F. 6 p. m., 72° F.; partly cloudy.

August 12.—6 a. m., 75° F. Noon, 76° F.; partly cloudy. 6 p. m., 74° F.; cloudy.

August 13.—6 a. m., 70° F. Noon, 75° F. 6 p. m., 74° F.; clear.

August 14.—6 a. m., 74° F.; clear. Noon, 75° F. 6 p. m., 74° F.; partly cloudy.

August 15.—6 a. m., 75° F.; cloudy.

General remarks.— This week this record has been changed to the original, first set out " beet plots " of one-quarter acre each, located right in town. The Hill one-half acre patch was a failure, not because the soil was not right but other reasons, too late, too dry, etc., when planted, and hail ruined what straggling plants there was about, so to make a fair test there should be a fair start and in season. Reports you have on the abandoned late plot will apply near enough for these plots as this season has been a very wet one, except in the first starting of beets. Both plots that I have now, original one-quarter acre plots, are in a very thrifty condition, large tops covering nearly the whole ground.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 16.—6 a. m., 60° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, .60 in.; cloudy; barometer 28.8.

August 17.—6 a. m., 65° F. Noon, 70° F. 6 p. m., 68° F.; partly cloudy; barometer 28.9.

August 18.—6 a. m., 65° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .15 in.; cloudy; barometer 29.

August 19.—6 a. m., 65° F. Noon, 65° F. 6 p. m., 68° F.; rainfall, .40 in.; cloudy; beets in fine condition and making large growth; barometer 28.9.

August 20.—6 a. m., 65° F. Noon, 70° F. 6 p. m., 65° F.; party cloudy; barometer 29.15.

August 21.—6 a. m., 60° F. Noon, 68° F. 6 p. m., 65° F.; partly cloudy; barometer 29.1.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 23.—6 a. m., 64° F. Noon, 70° F. 6 p. m., 65° F.; partly cloudy; weather favorable this week; no rain needed.

August 24.—6 a. m., 64° F.; partly cloudy. Noon, 68° F. 6 p. m., 62° F.; cloudy.

August 25.—6 a. m., 64° F. Noon, 74° F.; cloudy. 6 p. m., 62° F.; rainfall, .07 in.; partly cloudy.

August 26.—6 a. m., 62° F. Noon, 78° F. 6 p. m., 62° F.; clear.

August 27.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 68° F.; clear.

August 28.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 30.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 62° F.; rainfall, .50 in.; partly cloudy.

August 31.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 64° F.; clear; no bad effects from weather.

September 1.—6 a. m., 64° F. Noon, 74° F.; cloudy. 6 p. m., 66° F.; clear; weather favorable.

September 2.—6 a. m., 64° F. Noon, 74° F.; partly cloudy; rainfall, .15 in. 6 p. m., 64° F.; clear.

September 3.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 66° F.; clear.

September 4.—6 a. m., 62° F. Noon, 84° F.; 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 6.—6 a. m., 66° F. Noon, 90° F. 6 p. m., 78° F.; clear.

September 7.—6 a. m., 70° F.; partly cloudy. Noon, 86° F. 6 p. m., 70° F.; clear.

September 8.—6 a. m., 66° F. Noon, 92° F. 6 p. m., 72° F.; clear; beets doing nicely.

September 9.—6 a. m., 70° F. Noon, 95° F. 6 p. m., 76° F.; clear.

September 10.—6 a. m., 74° F. Noon, 94° F. 6 p. m., 74° F.; clear.

September 11.—6 a. m., 76° F. Noon, 80° F.; clear. 6 p. m., 76° F.; partly cloudy.

September 12.—6 a. m., nice day; 70° to 80° F.; nearly clear.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 13.—6 a. m., 68° F. Noon, 72° F. 6 p. m., 70° F.; clear; the beets do not seem to be enlarging much now; think they have made nearly the full growth; tops are yet green and beets of good size and very thrifty looking.

September 14.—6 a. m., 76° F. Noon, 80° F. 6 p. m., 78° F.; clear.

September 15.—6 a. m., 80° F. Noon, 85° F. 6 p. m., 82° F.; clear.

September 16.—6 a. m., 80 F. Noon, 85° F.; cloudy; rainfall, .15 in. 6 p. m., 78° F.; partly cloudy.

September 17.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 60° F.; partly cloudy.

September 18.—6 a. m., 45° F. Noon, 65° F. 6 p. m., 60° F.; partly cloudy.

September 19.—6 a. m., 70° F.; partly cloudy.

General remarks.—I let out the job on each plot at a cost of $10 for plowing, seeding, cultivation and all work, which is less than I think it would cost by day work. I also gave the use of about one-fourth acre of land adjoining for a garden, to the one taking care of beets, but this I made no charge for. The beets have been very nicely cared for. In the town plot I do not think a weed can be found in them.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 20.—6 a. m., 45° F.; rainfall, .12 in. Noon, 55° F. 6 p. m., 50° F.; partly cloudy.

September 21.—6 a. m., 50° F. Noon, 55° F. 6 p. m., 60° F.; partly cloudy.

September 22.—6 a. m., 55° F. Noon, 65° F. 6 p. m., 60° F.; partly cloudy.

September 23.—6 a. m., 50° F.; cloudy. Noon, 56° F. 6 p. m., 52° F.; partly cloudy.

September 24.—6 a. m., 55° F.; rainfall, .65 in. Noon, 65° F. 6 p. m., 62° F.; partly cloudy.

September 25.—6 a. m., 60° F.; cloudy. Noon, 70° F. 6 p. m., 65° F.; clear.

September 26.—6 a. m., 75° F.; partly cloudy.

REPORT FOR WEEK ENDING OCTOBER 3, 1897.

September 27.—6 a. m., 60° F.; partly cloudy. Noon, 65° F. 6 p. m., 60° F.; clear.

September 28.—6 a. m., 40° F. Noon, 55° F. 6 p. m., 50° F.; clear.

September 29.—6 a. m., 48° F. Noon, 58° F. 6 p. m., 52° F.; clear; it has been so cool the beets seem to stand the prolonged dry spell all right; tops are green yet and show but little signs of withering, except on one corner, where a shade tree is near by.

September 30.—6 a. m., 64° F.; partly cloudy. Noon, 72° F. 6 p. m., 68° F.; clear.

October 1.—6 a. m., 68° F. Noon, 74° F. 6 p. m., 70° F.; clear.

October 2.—6 a. m., 60° F.; partly cloudy. Noon, 68° F. 6 p. m., 65° F.; clear.

October 3.—6 a. m., 75° F.; clear.

General remarks.—It has come to a time of the season that we are liable to have frosts, although the lake shores are generally the last section to get a frost. There has already been frosts—light frosts—back on the hills. The beets have a good growth and look fine.

REPORT FOR WEEK ENDING OCTOBER 10, 1897.

October 4.—6 a. m., 55° F. Noon, 70° F. 6 p. m., 60° F.; clear.

October 5.—6 a. m., 55° F. Noon, 75° F. 6 p. m., 68° F.; partly cloudy.

October 6.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 55° F.; partly cloudy.

October 7.—6 a. m., 50° F.; rainfall, .30 in.; cloudy. Noon, 55° F. 6 p. m., 48° F.; partly cloudy.

October 8.—6 a. m., 46° F.; partly cloudy. Noon, 42° F. 6 p. m., 36° F.; cloudy.

October 9.—6 a. m., 46° F.; cloudy; Noon, 42° F. 6 p. m., 36° F.; clear; no change since last week; still green tops.

October 10.—6 a. m., 40° F. Noon, 55° F.; clear.

General remarks.—We are liable to have frosts soon, and would like to have your instructions in regard to harvesting the beets. Over back of the hills the farmers have had several frosts, but on the lake there this grape-belt region is about the last locality in this State to be hit with frosts, says the committee for the Board of Trade. Here I distributed about 100 packages of sugar beets, and while they were put out too late, they are most of them doing finely where they have had care. I am satisfied that they can be grown here successfully if test is only right, and think it will be, as climate is right to grow sweet grapes, etc.

REPORT FOR WEEK ENDING OCTOBER 17, 1897.

October 11.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 68° F.; cloudy.

October 12.—6 a. m., 65° F.; rainfall, .80 in.; cloudy. Noon, 63° F. 6 p. m., 60° F.; partly cloudy.

October 13.—6 a. m., 55° F. Noon, 65° F. 6 p. m., 60° F.; clear.

October 14.—6 a. m., 70° F. Noon, 75° F. 6 p. m., 73° F.; clear.

October 15.—6 a. m., 75° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy; same general appearance as last week; tops still green, lower leaves on ground slightly turning at ends.

October 16.—6 a. m., 75° F. Noon, 78° F. 6 p. m., 75° F.; cloudy.

October 17.—6 a. m., 65° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 24, 1897.

October 18.—6 a. m., 45° F. Noon, 55° F.; clear. 6 p. m., 50° F.; partly cloudy.

October 19.—6 a. m., 50° F. Noon, 60° F. 6 p. m., 58° F.; cloudy and smoky all day; beet tops seem to keep green and center shows green growth; the outside leaves are mostly green, but some of the ends turning a little; beets have a good growth, and the coming week, latter part, think best to harvest, and will do so if not ordered otherwise.

October 20.—6 a. m., 60° F. Noon, 60° F.; rainfall, light. 6 p. m., 58° F.; sprinkling; cloudy and smoky all day.

October 21.—6 a. m., 60° F.; cloudy. Noon, 60° F. 6 p. m., 60° F.; partly cloudy.

October 22.—6 a. m., 58° F. Noon, 60° F.; cloudy. 6 p. m., 58° F.; clear.

October 23.—6 a. m., 50° F. Noon, 58° F. 6 p. m., 50° F.; clear.

October 24.—6 a. m., 45° F. Noon, 55° F.; clear.

General remarks.—Will send on, according to your orders, the beets to be tested.

REPORT FOR WEEK ENDING OCTOBER 30, 1897.

October 25.—6 a. m., 46° F. Noon, 55° F. 6 p. m., 50° F.; partly cloudy.

October 26.—6 a. m., 50° F.; cloudy and foggy. Noon, 55° F. 6 p. m., 56° F.; partly cloudy.

October 27.—6 a. m., 60° F. Noon, 65° F. 6 p. m., 50° F.; clear.

October 28.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 60° F.; partly cloudy.

October 29.—6 a. m., 45° F. Noon, 48° F. 6 p. m., 46° F.; cloudy.

October 30.—6 a. m., 45° F. Noon, 48° F. 6 p. m., 46° F.; cloudy.

General remarks.—To-day Professor Roberts was in town, and I had him look at my beets; he says they show no signs of second growth, and need not hurry in harvesting, more than to get them out before frost is bad; will defer pulling them until next week, if favorable weather; tops still green.

REPORT FOR WEEK ENDING NOVEMBER 7, 1897.

November 1.—6 a. m., 54° F. Noon, 56° F. 6 p. m., 55° F.; rainfall, .70 in.; cloudy.

November 2.—6 a. m., 56° F.; cloudy. Noon, 58° F. 6 p. m., 54° F.; partly cloudy.

November 3.—6 a. m., 48° F. Noon, 55° F. 6 p. m., 50° F.; partly cloudy.

November 4.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 55° F.; partly cloudy; harvested the most of the beets; few rows left for late harvest.

November 5.—6 a. m., 54° F. Noon, 56° F. 6 p. m., 55° F.; cloudy.

November 6.—6 a. m., 52° F. Noon, 55° F. 6 p. m., 54° F.; rainfall, .15 in.; cloudy.

November 7.—6 a. m., 45° F.; partly cloudy.

General remarks.—In harvesting these beets we took two average rows, making a total length of 186 feet, for one row, putting them in piles, selecting an equal number from each pile, as directed; weighed the whole amount of the rows, figured out the rest on the same basis, and made the total harvest 13,600 pounds from the half-acre, if I have figured right, or at the rate of thirteen tons for an acre. In my report sent to the Station, I gave the summary of the weather as follows: June dry, and first half of July quite dry; last of July very wet, frequent rains; fore part of August quite dry and the last half wet; September quite a dry month; October cool and rained each week. Total rain fall during the crop, about fifteen inches. We are saving a few rows for late harvest, which may be caught by freezing, but if weather is favorable, would like to send a few for analysis later. We will send only two, or another fifty pounds, if you wish. The general complaint of those putting in seed as late as we did is that the beginning of the crop it was rather dry weather, but by extra good care we succeeded in getting a good crop, although they should have been put in in May to guard against dry weather in starting plants.

HERMON L. KENT,
Experimenter.

WESTFIELD, N. Y., *November* 8, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 157 days; making 22 3-7 weeks; that the whole amount of rainfall in the whole time upon the beets was 14.92; that the average rainfall per month was 2.85; that the average rainfall per week was .665; and that the average rainfall per day was .095; that the number of days on which the sun shone was 31; that the number of cloudy days was 87; that the number of days on which it rained was 40; the kind of soil on which this patch of beets was raised was loose and mellow; the amount of beets raised upon the patch would indicate that that soil would raise 13.60 tons of Klein Wanzlebener per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 13.70 per cent. of sugar. This would indicate that that soil would raise beets that would produce 3726.40 pounds of sugar per acre from the Klein Wanzlebener, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 4.

REPORT FOR WEEK ENDING MAY 29, 1897.

May 27.—Sowed beet seed; shower after seed was sowed.

General remarks.—The field selected for sowing one acre to sugar beets is a part of a steep hill, facing the north. The soil, a clay loam, somewhat stony. It had been mowed for five years previous to last year, when it received twenty loads of barnyard manure to the acre, then plowed and planted to potatoes. It produced about two hundred bushels to the acre. This year the ground was plowed with a three-horse team, ten inches deep; followed in the furrow with a sub-soil plow, drawn by two horses, which stirred up the ground from five to seven inches deeper, making the depth plowed from fifteen to seventeen inches, two men and two teams working from 7 a. m. to 6.30 p. m. May 20th, was at Albany receiving instruction from the Commissioner and Prof. Jordan in regard to sowing the seed and cultivation of the sugar beets. May 21st, rained in morning, ground too wet to work. Ordered special fertilizer. May 22d, Monday, ground too wet to work; in afternoon, from 12.30 to 7 o'clock, one man and team went over the ground twice with a wheel-harrow and once with a harrow-roller, leaving the ground in fine condition for planting. Shower at night. May 23d, hard rain in morning. May 24th, rain in morning, ground very wet. May 25th, ground too wet to go onto it. May 26th, in afternoon, sowed on the acre 1,000 pounds of a special fertilizer, bought of Halstead & Pierson, Chatham, N. Y., prepared as directed by Prof. Jordan; sowed it with the fertilizer attachment of grain drill, going over the ground twice, sowing five hundred pounds each time, one man and team working four hours. May 27th, went over the ground with a roller, man and team working two hours; commenced sowing the beet seed at 7 a. m., with a Planet, Jr., hand seed drill; the first half-acre was put in drills twenty inches apart; sowed seven pounds Klein Wanzlebener seed; one row of potatoes was then planted to separate the beets. The next half-acre was sowed in drills twenty-four inches apart, using seven and one-fourth pounds of Vilmorin Improved beet seed, making one full acre, by survey, sowed with beet seed, exclusive of the row of potatoes; man finished sowing the seed at 4 p. m.; commenced raining just as he finished drilling in the seed; had a hard shower. Time of man sowing seed, three-fourths day.

REPORT FOR WEEK ENDING JUNE 5, 1897.

May 30.—Cloudy forenoon; clear afternoon.

May 31.—Cloudy through the day.

June 1.—Cloudy and windy.

June 2.—6 a. m., 36° F. Noon, 65° F. 6 p. m., 50° F.; clear and cold.

June 3.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 68° F.; hard shower in evening; clear forenoon; cloudy afternoon; rains in evening; beets began sprouting through the ground.

June 4.—6 a. m., 65° F. Noon, 80° F. 6 p. m., 70° F.; hard shower; clearing and showery.

June 5.—6 a. m., 52° F. Noon, 72° F. 6 p. m., 66° F.; clear.

General remarks.—Thursday, June 3d, the first of the beet sprouts showed above the ground.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 58° F. Noon, 71° F.; clear forenoon. 6 p. m., 68° F.; cloudy afternoon.

June 7.—6 a. m., 52° F. Noon, 60° F. 6 p. m., 56° F.; cloudy.

June 8.—6 a. m., 50° F. Noon, 64° F. 6 p. m., 58° F.; cloudy.

June 9.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 58° F.; rainfall, 2 in.; rain all day.

June 10.—6 a. m., 52° F. Noon, 64° F.; rainfall, .12 in.; rain forenoon. 6 p. m., 60° F.; clear afternoon.

June 11.—6 a. m., 56° F. Noon, 74° F. 6 p. m., 72° F.; clear.

June 12.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 68° F.; clear; beets large enough to cultivate.

General remarks.—Beets have come up uneven; to-day, the 12th, some of the beet leaves are one and one-half inches long, while others are just coming thorugh the ground, and occasionally spaces two to three feet where none of the seed has sprouted, but generally they have come up very thick; will transplant and fill in the vacant spaces; the rows are now plainly seen; started the hand cultivator to-day, but found the ground too wet to work well; so only cultivated two rows.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 66° F.; rainfall, .10 in.; clear morning; shower afternoon; clear evening.

June 14.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, .11 in.; clear morning; shower afternoon; cold and wet.

June 15.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, .21 in.; frequent showers.

June 16.—6 a. m., 50° F. Noon, 74° F. 6 p. m., 66° F.; clear.

June 17.—6 a. m., 54° F. Noon, 72° F. 6 p. m., 68° F.; clear.

June 18.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 70° F.; clear.

June 19.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 72° F.; clear forenoon; cloudy afternoon; from one inch to four inches length of leaf; beets now making good growth.

General remarks.—On account of delay in cultivating, occasioned by wet weather, the weeds got such a start of the beets that I found it necessary to have them hoed by hand before they could be cultivated. June 14, one-half day man hoeing; June 15, one day man hoeing; June 17, one day man hoeing; June 18, one day man hoeing; June 19, one-half day man and horse cultivating.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 58° F. Noon, 69° F. 6 p. m., 62° F.; rainfall, .17 in.; rain forenoon; clear afternoon.

June 21.—6 a. m., 44° F. Noon, 66° F. 6 p. m., 62° F.; clear.

June 22.—6 a. m., 44° F. Noon, 72° F. 6 p. m., 65° F.; clear.

June 23.—6 a. m., 58° F. Noon, 80° F. 6 p. m., 75° F.; clear.

June 24.—6 a. m., 66° F. Noon, 84° F. 6 p. m., 80° F.; clear.

June 25.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 74° F.; clear.

June 26.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 64° F.; clear.

General remarks.—June 26, one-half day, man and horse, cultivating; June 26, one day, man with hand cultivator.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 46° F. Noon, 70° F. 6 p. m., 65° F.; clear.

June 28.—6 a. m., 48° F. Noon, 70° F. 6 p. m., 62° F.; clear.

June 29.—6 a. m., 60° F. Noon, 77° F. 6 p. m., 62° F.; rainfall, 1 in.; cloudy forenoon; rain afternoon.

June 30.—6 a. m., 66° F. Noon, 78° F. 6 p. m., 72° F.; clear.

July 1.—6 a. m., 62° F. Noon, 82° F. 6 p. m., 76° F.; clear.

July 2.—6 a. m., 64° F. Noon, 86° F. 6 p. m., 78° F.; cloudy forenoon; clear afternoon.

July 3.—6 a. m., 60° F. Noon, 86° F. 6 p. m., 78° F.; clear.

General remarks.—July 3, one-half day, man and horse, cultivating.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 80° F.; clear.

July 5.—6 a. m., 72° F. Noon, 90° F. 6 p. m., 86° F.; clear.

July 6.—6 a. m., 74° F. Noon, 91° F. 6 p. m., 76° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

July 7.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 74° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

July 8.—6 a. m., 66° F. Noon, 82° F. 6 p. m., 80° F.; clear.

July 9.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 86° F.; clear.

July 10.—6 a. m., 73° F. Noon, 90° F. 6 p. m., 84° F.; clear.

General remarks.—June 8, one day, man thinning beets, $1; June 10, one-half day, man and horse, cultivating, 75 cents.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

July 12.—6 a. m., 69° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .45 in.; cloudy forenoon; rain afternoon.

July 13.—6 a. m., 69° F. Noon, 73° F. 6 p. m., 70° F.; rainfall, .98 in.; rain.

July 14.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 68° F.; rainfall, 3.45 in.

July 15.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 65° F.; rainfall, .41 in.; showers.

July 16.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 75° F.; clear.

July 17.—6 a. m., 66° F. Noon, 82° F. 6 p. m., 70° F.; rainfall, .26 in.; shower.

General remarks.—July 15, two men ten hours each weeding and thinning out beets; July 16, two men ten hours each weeding and thinning out beets; July 17, two men ten hours each weeding and thinning out beets.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 68° F.; cloudy.

July 19.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 74° F.; cloudy.

July 20.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 78° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

July 21.—6 a. m., 78° F. Noon, 78° F. 6 p. m., 74° F.; rainfall, .14 in.; clear forenoon; shower afternoon.

July 22.—6 a. m., 71° F. Noon, 76° F. 6 p. m., 75° F.; rainfall, .20 in.; showery.

July 23.—6 a. m., 70° F. Noon, 86° F. 6 p. m., 70° F.; rainfall, .12 in.; clear forenoon; shower afternoon.

July 24.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 65° F.; rainfall, .08 in.; clear forenoon; shower afternoon.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 70° F.; rainfall, .03 in.; clear forenoon; shower afternoon.

July 26.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 66° F.; rainfall, .01 in.; cloudy; shower.

July 27.—6 a. m., 58° F. Noon, 64° F. 6 p. m., 64° F.; rainfall, .05 in.; cloudy; shower.

July 28.—6 a. m., 56° F. Noon, 63° F. 6 p. m., 61° F.; rainfall, .94 in.; cloudy forenoon; rain afternoon.

July 29.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; rainfall, 1.78 in.; rainy.

July 30.—6 a. m., 62° F. Noon, 73° F. 6 p. m., 70° F.; rainfall, .05 in.; shower and cloudy; clear afternoon.

July 31.—6 a. m., 65° F. Noon, 82° F. 6 p. m., 68° F.; clear.

General remarks.—July 26, one-half day man and horse cultivating; July 30, one day man pulling out weeds.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 68° F.; clear.

August 2.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 74° F.; clear.

August 3.—6 a. m., 60° F. Noon, 82° F. 6 p. m., 80° F.; clear.

August 4.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 72° F.; clear.

August 5.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 68° F.; rainfall, .44 in.; rain forenoon; clear afternoon.

August 6.—6 a. m., 50° F. Noon, 77° F. 6 p. m., 65° F.; clear forenoon; shower afternoon.

August 7.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 65° F.; rainfall, .31 in.; cloudy and slight shower; clear afternoon.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 70° F.; clear.

August 9.—6 a. m., 60° F. Noon, 73° F. 6 p. m., 62° F.; clear.

August 10.—6 a. m., 62° F.; rainfall, .10 in.; clear forenoon; shower afternoon.

August 11.—Rainfall, .89 in.; showery.

August 12.—Rainfall, .16 in.; clear forenoon; shower afternoon.

August 13.—Clear.

August 14.—Clear.

General remarks.—August 13, one day, man pulling weeds out of beets; August 14, one day, man pulling weeds out of beets.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 70° F. Noon, 80° F. 6 p. m., 68° F.; rainfall, .68 in.; cloudy forenoon; shower afternoon.

August 16.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .07 in.; clear forenoon; shower afternoon.

August 17.—6 a. m., 58° F. Noon, 70° F. 6 p. m., 64° F.; clear.

August 18.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 70° F.; clear.

August 19.—6 a. m., 60° F. Noon, 71° F. 6 p. m., 68° F.; clear.

August 20.—6 a. m., 56° F. Noon, 66° F. 6 p. m., 60° F.; rainfall, .10 in.; clear; shower afternoon.

August 21.—6 a. m., 46° F. Noon, 74° F. 6 p. m., 68° F.; clear.

General remarks.—August 19, one-half day, man weeding beets; August 20, one-half day, man weeding beets.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .09 in.; clear forenoon; shower afternoon.

August 23.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 66° F.; clear.

August 24.—6 a. m., 59° F. Noon, 66° F. 6 p. m., 65° F.; rainfall, .97 in.; showery.

August 25.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .05 in.; clear forenoon; shower afternoon.

August 26.—6 a. m., 53° F. Noon, 70° F. 6 p. m., 66° F.; clear.

August 27.—6 a. m., 46° F. Noon, 78° F. 6 p. m., 70° F.; clear.

August 28.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 68° F.; clear.

General remarks.—August 24, two men all day pulling weeds out of beets, $1 each; August 25, two men all day pulling weeds out of beets, $1 each.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 70° F.: clear.

August 30.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 60° F.; clear.

August 31.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 66° F.; clear.

September 1.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 66° F.; clear.

September 2.—6 a. m., 58° F. Noon, 66° F. 6 p. m., 64° F.; rainfall, .78 in.: rain forenoon; clear afternoon.

September 3.—6 a. m., 44° F. Noon, 65° F. 6 p. m., 58° F.; clear

September 4.—6 a. m., 46° F. Noon, 70° F. 6 p. m., 64° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 53° F. Noon, 76° F. 6 p. m., 65° F.; clear.

September 6.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 72° F.; clear.

September 7.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 65° F.; rainfall, .03 in.; clear forenoon; shower afternoon.

September 8.—6 a. m., 60° F. Noon, 75° F. 6 p. m., 64° F.; clear.

September 9.—6 a. m., 63° F. Noon, 78° F. 6 p. m., 65° F.; clear.

September 10.—6 a. m., 63° F. Noon, 92° F. 6 p. m., 75° F.; clear.

September 11.—6 a. m., 65° F. Noon, 88° F. 6 p. m., 58° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 42° F. Noon, 72° F. 6 p. m., 68° F.; clear forenoon; cloudy afternoon.

September 13.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 72° F.; clear.

September 14.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 62° F.; clear.

September 15.—6 a. m., 42° F. Noon, 67° F. 6 p. m., 55° F.; clear.

September 16.—6 a. m., 42° F. Noon, 76° F. 6 p. m., 72° F.; clear.

September 17.—6 a. m., 58° F. Noon, 72° F. 6 p. m., 60° F.; rainfall, .15 in.; rain forenoon; clear afternoon.

September 18.—6 a. m., 37° F. Noon, 62° F. 6 p. m., 50° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 66° F.; clear.

September 20.—6 a. m., 50° F. Noon, 56° F. 6 p. m., 50° F.; rainfall, .25 in.; clear forenoon; rain afternoon.

September 21.—6 a. m., 40° F. Noon, 54° F. 6 p. m., 46° F.; rainfall, .06 in.; slight rain forenoon; clear afternoon.

September 22.—6 a. m., 33° F. Noon, 62° F. 6 p. m., 65° F.; clear.

September 23.—6 a. m., 50° F. Noon, 61° F. 6 p. m., 58° F.; rainfall, .13 in.; cloudy forenoon; rain afternoon.

September 24.—6 a. m., 54° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, .06 in.; cloudy forenoon; rain afternoon.

September 25.—6 a. m., 54° F. Noon, 74° F. 6 p. m., 60° F.; clear.

General remarks.—Some of the lower leaves of the beets are turning brown, showing that they are ripening.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 46° F. Noon, 76° F. 6 p. m., 64° F.; rainfall, .05 in.; clear forenoon; shower afternoon.

September 27.—6 a. m., 42° F. Noon, 52° F. 6 p. m., 48° F.; clear.

September 28.—6 a. m., 30° F. Noon, 60° F. 6 p. m., 48° F.; clear.

September 29.—6 a. m., 40° F. Noon, 68° F. 6 p. m., 50° F.; clear.

September 30.—6 a. m., 38° F. Noon, 74° F. 6 p. m., 60° F.; clear.

October 1.—6 a. m., 48° F. Noon, 84° F. 6 p. m., 74° F.; clear.

October 2.—6 a. m., 48° F. Noon, 66° F. 6 p. m., 52° F.; rainfall, .02 in.; high wind and shower forenoon; clear afternoon.

General remarks.—Beets ripening slowly; a few of the lower leaves are dying; no new growth of leaves; the beets still growing. I think they will be ripe enough to harvest in a few days.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 30° F. Noon, 62° F. 6 p. m., 48° F.; clear.

October 4.—6 a. m., 30° F. Noon, 72° F. 6 p. m., 50° F.; clear.

October 5.—6 a. m., 34° F. Noon, 70° F. 6 p. m., 50° F.; clear.

October 6.—6 a. m., 54° F. Noon. 60° F. 6 p. m., 50° F.; clear.

October 7.—6 a. m., 45° F. Noon, 55° F. 6 p. m., 50° F.; rainfall, .03 in.; shower forenoon; clear afternoon.

October 8.—6 a. m., 36° F. Noon, 58° F. 6 p. m., 52° F.; clear.

October 9.—6 a. m., 50° F. Noon, 58° F. 6 p. m., 47° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 25° F. Noon, 58° F. 6 p. m., 45° F.; clear.

October 11.—6 a. m., 48° F. Noon, 64° F. 6 p. m., 60° F.; clear.

October 12.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 64° F.; rainfall, .74 in.; rain all day.

October 13.—6 a. m., 42° F. Noon, 67° F. 6 p. m., 52° F.; clear.

October 14.—6 a. m., 36° F. Noon, 65° F. 6 p. m., 60° F.; clear.

October 15.—6 a. m., 50° F. Noon, 84° F. 6 p. m., 65° F.; clear.

October 16.—6 a. m., 60° F. Noon, 86° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 40° F. Noon, 54° F. 6 p. m., 46° F.; clear.

October 18.—6 a. m., 26° F. Noon, 60° F. 6 p. m., 42° F.; clear.

October 19.—6 a. m., 34° F. Noon, 60° F. 6 p. m., 40° F.; clear.

October 20.—6 a. m., 40° F. Noon, 59° F. 6 p. m., 50° F.; clear.

General remarks.—October 19th commenced harvesting the beets; plowed a deep furrow close to the beets, then pulled them out by their tops and threw them in piles; then plowed two deep furrows between each row; the beets were then picked out very easily. Three men and one team of horses worked two days in getting the one acre of beets out of the ground and in piles; two men worked five days cutting tops off the beets and drawing and storing them in cellar. The Klein Wanzlebener beet yielded at the rate of eighteen tons to the acre. The Vilmorin Improved beet yielded at the rate of twelve tons to the acre.

HENRY S. AMBLER,
Experimenter.

CHATHAM, N. Y., *October* 23, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 154 days; making 22 weeks; that the whole amount of rainfall in the whole time upon the beets was 20.12; that the average rainfall per month was 3.9; that the average rainfall per week was .91; and that the average rainfall per day was .13; that the number of days on which the sun shone was 91; that the number of cloudy days was 13; that the number of days on which it rained was 50; the kind of soil on which this patch of beets was raised was clay loam, somewhat stony; the amount of beets raised upon the patch would indicate that that soil would raise 18 tonsof Klein Wanzlebener per acre and 12 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 15.18 percentage of sugar and the Vilmorin Improved 15.72 percentage of sugar. This would indicate that that soil would raise beets that would produce 5464.80 pounds of sugar per acre from the Klein Wanzlebener and 3772.80 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 5.

REPORT FOR WEEK ENDING JUNE 5, 1897.

June 3.—Noon, 74° F.; cloudy. Planted beets June 3d; the land was plowed last fall, manured in winter and plowed again this spring. I sowed broadcast eight hundred pounds of Wheeler fertilizers, then well harrowed; the rows are eighteen inches apart; the soil is of sandy loam, free of stone.

June 4.—A very little rain; partly cloudy.

June 5.—Clear.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—Clear; plowing, harrowing and smoothing, $1.75.

June 7.—Cloudy.

June 8.—Cloudy.

June 9.—6 a. m., 48° F. Noon, 60° F. 6 p. m., 56° F.; rainfall, .75 in.; cloudy.

June 10.—6 a. m., 48° F. Noon, 64° F. 6 p. m., 58° F.; rainfall, .06 in.; cloudy.

June 11.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 78° F.; clear.

June 12.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 70° F.; clear; beets just pricking through.

General remarks.—Rain gauge not received for use until the 9th; rained all day of 8th.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 72° F.; rainfall, .03 in.; forenoon clear, afternoon cloudy.

June 14.—6 a. m., 52° F. Noon, 72° F. 6 p. m., 72° F.; clear.

June 15.—6 a. m., 52° F. Noon, 78° F. 6 p. m., 74° F.; clear.

June 16.—6 a. m., 54° F. Noon, 78° F. 6 p. m., 66° F.; cloudy.

June 17.—6 a. m., 46° F. Noon, 62° F. 6 p. m., 60° F.; forenoon clear, afternoon cloudy.

June 18.—6 a. m., 50° F. Noon, 66° F. 6 p. m., 60° F.; cloudy; rainfall, .05 in.; the surface of the ground is getting very dry.

June 19.—6 a. m., 50° F. Noon, 80° F. 6 p. m., 72° F.; forenoon clear, afternoon cloudy; beets about one inch high.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 62° F. Noon, 66° F. 6 p. m., 56° F.; rainfall, .20 in.; cloudy.

June 21.—6 a. m., 42° F. Noon, 62° F. 6 p. m., 66° F.; clear.

June 22.—6 a. m., 42° F. Noon, 72° F. 6 p. m., 74° F.; clear.

June 23.—6 a. m., 56° F. Noon, 80° F. 6 p. m., 80° F.; forenoon clear, afternoon cloudy.

June 24.—6 a. m., 68° F. Noon, 86° F. 6 p. m., 72° F.; rainfall, .35 in.; cloudy.

June 25.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 68° F.; rainfall, .15 in.; forenoon cloudy, afternoon clear.

June 26.—6 a. m., 56° F. Noon, 64° F. 6 p. m., 62° F.; clear.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 79° F.; clear.

June 28.—6 a. m., 42° F. Noon, 74° F. 6 p. m., 62° F.; clear.

June 29.—6 a. m., 54° F. Noon, 76° F. 6 p. m., 64° F.; rainfall, .26 in.; cloudy.

June 30.—6 a. m., 68° F. Noon, 68° F. 6 p. m., 72° F.; rainfall, 1 in.; cloudy.

July 1.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 84° F.; forenoon cloudy, afternoon cloudy.

July 2.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 80° F.; clear.

July 3.—6 a. m., 60° F. Noon, 88° F. 6 p. m., 90° F.; clear.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 76° F. Noon, 88° F. 6 p. m., 86° F.; clear.

July 5.—6 a. m., 72° F. Noon, 94° F. 6 p. m., 92° F.; clear.

July 6.—6 a. m., 72° F. Noon, 89° F. 6 p. m., 80° F.; clear.

July 7.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 92° F.; clear.

July 8.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 92° F.; clear.

July 9.—6 a. m., 66° F. Noon, 92° F. 6 p. m., 98° F.; clear.

July 10.—6 a. m., 68° F. Noon, 94° F. 6 p. m., 94° F.; clear.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 82° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

July 12.—6 a. m., 68° F. Noon, 70° F. 6 p. m., 64° F.; rainfall, .70 in.; cloudy.

July 13.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 78° F.; forenoon cloudy, afternoon clear.

July 14.—6 a. m., 62° F. Noon, 82° F. 6 p. m., 80° F.; rainfall, .13 in.; cloudy.

July 15.—6 a. m., 56° F. Noon, 80° F. 6 p. m., 76° F.; forenoon cloudy, afternoon clear.

July 16.—6 a. m., 56° F. Noon, 82° F. 6 p. m., 82° F.; clear.

July 17.—6 a. m., 69° F. Noon, 80° F. 6 p. m., 80° F.; rainfall, .19 in.; cloudy.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 80° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

July 19.—6 a. m., 66° F. Noon, 84° F. 6 p. m., 80° F.; cloudy.

July 20.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 70° F.; forenoon clear, afternoon cloudy.

July 21.—6 a. m., 64° F. Noon, 82° F. 6 p. m., 80° F.; forenoon clear, afternoon hazy.

July 22.—6 a. m., 70° F. Noon, 84° F.; rainfall, .31 in. 6 p. m., 86° F.; forenoon cloudy, afternoon clear.

July 23.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, .43 in.; cloudy.

July 24.—6 a. m., 64° F. Noon, 73° F. 6 p. m., 80° F.; rainfall, .71 in.; cloudy.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 68° F. Noon, 78° F.; rainfall, .21 in. 6 p. m., 80° F.; cloudy.

July 26.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 66° F.; cloudy.

July 27.—6 a. m., 58° F. Noon, 66° F. 6 p. m., 60° F.; rainfall, .70 in.; cloudy.

July 28.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 60° F.; rainfall, .20 in.; cloudy.

July 29.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, .07 in.; cloudy.

July 30.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 74° F.; rainfall, .06 in.; cloudy.

July 31.—6 a. m., 62° F. Noon, 78° F. 6 p. m.. 80° F.; clear.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 76° F.; clear.

August 2.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 80° F.; clear.

August 3.—6 a. m., 68° F. Noon, 86° F. 6 p. m., 89° F.; clear.

August 4.—6 a. m., 66° F. Noon, 90° F. 6 p. m., 80° F.; forenoon clear, afternoon cloudy.

August 5.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 72° F.; clear.

August 6.—6 a. m., 50° F. Noon, 78° F. 6 p. m., 66° F.; clear.

August 7.—6 a. m., 50° F. Noon, 86° F. 6 p. m., 80° F.; clear.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 64° F. Noon, 80° F. 6 p. m., 78° F.; clear.

August 9.—6 a. m., 64° F. Noon, 84° F. 6 p. m., 74° F.; clear.

August 10.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .14 in.; forenoon clear, afternoon cloudy.

August 11.—6 a. m., 66° F. Noon, 76° F. 6 p. m., 68° F.; cloudy.

August 12.—6 a. m., 56° F. Noon, 72° F. 6 p. m., 64° F.; rainfall, .20 in.; cloudy.

August 13.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 72° F.; cloudy.

August 14.—6 a. m., 50° F. Noon, 84° F. 6 p. m., 82° F.; clear.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 74° F. Noon, 76° F. 6 p. m., 74° F.; cloudy.

August 16.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 72° F.; rainfall, .31 in.; cloudy.

August 17.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 62° F.; rainfall, .14 in.; cloudy.

August 18.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 68° F.; forenoon cloudy, afternoon clear.

August 19.—6 a. m., 52° F. Noon, 74° F. 6 p. m., 68° F.; forenoon clear, afternoon cloudy.

August 20.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 68° F.; clear.

August 21.—6 a. m., 46° F. Noon, 76° F. 6 p. m., 74° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 64° F. Noon, 84° F. 6 p. m., 78° F.; clear.

August 23.—6 a. m., 64° F. Noon, 70° F.; rainfall, .29 in. 6 p. m., 66° F.; cloudy.

August 24.—6 a. m., 62° F. Noon, 68° F. 6 p. m., 76° F.; rainfall, .15 in.; cloudy.

August 25.—6 a. m., 62° F. Noon, 74° F. 6 p. m., 66° F.; cloudy.

August 26.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 70° F.; clear.

August 27.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 76° F.; cloudy.

August 28.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 69° F. Noon, 89° F. 6 p. m., 80° F.; clear.

August 30.—6 a. m., 66° F. Noon, 76° F. 6 p. m., 60° F.; rainfall, .12 in.; clear.

August 31.—6 a. m., 46° F. Noon, 80° F. 6 p. m., 74° F.; cloudy.

September 1.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .53 in.; cloudy.

September 2.—6 a. m., 62° F. Noon, 76° F. 6 p. m., 74° F.; clear.

September 3.—6 a. m., 46° F. Noon, 72° F. 6 p. m., 66° F.; clear.

September 4.—6 a. m., 46° F. Noon, 80° F. 6 p. m., 76° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 50° F. Noon, 84° F. 6 p. m., 80° F.; clear; it is very dry and the tops of the beets are turning yellow.

September 6.—6 a. m., 56° F. Noon, 90° F. 6 p. m., 80° F.; clear.

September 7.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 76° F.; clear.

September 8.—6 a. m., 64° F. Noon, 88° F. 6 p. m., 89° F.; clear.

September 9.—6 a. m., 56° F. Noon, 94° F. 6 p. m., 80° F.; clear.

September 10.—6 a. m., 60° F. Noon, 98° F. 6 p. m., 80° F.; clear.

September 11.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 48° F. Noon, 72° F. 6 p. m., 64° F.; clear.

September 13.—6 a. m., 64° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .10 in.; cloudy.

September 14.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 70° F.; rainfall, .25 in.; cloudy.

September 15.—6 a. m., 44° F. Noon, 80° F. 6 p. m., 66° F.; cloudy.

September 16.—6 a. m., 50° F. Noon, 88° F. 6 p. m., 76° F.; clear.

September 17.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 56° F.; rainfall, .40 in.; cloudy.

September 18.—6 a. m., 38° F. Noon, 72° F. 6 p. m., 60° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 60° F. Noon, 62° F. 6 p. m., 58° F.; clear.
September 20.—6 a. m., 50° F. Noon, 50° F. 6 p. m., 46° F.; clear.
September 21.—6 a. m., 40° F. Noon, 62° F. 6 p. m., 68° F.; rainfall, .20 in.; cloudy.
September 22.—6 a. m., 36° F. Noon, 70° F. 6 p. m., 60° F.; clear.
September 23.—6 a. m., 60° F. Noon, 60° F. 6 p. m., 50° F.; rainfall, .15 in.; cloudy.
September 24.—6 a. m., 52° F. Noon, 62° F. 6 p. m., 58° F.; rainfall, 1.65 in.; cloudy.
September 25.—6 a. m., 40° F. Noon, 84° F. 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 74° F.; rainfall, .18 in.; cloudy.
September 27.—6 a. m., 46° F. Noon, 64° F. 6 p. m., 50° F.; clear.
September 28.—6 a. m., 32° F. Noon, 66° F. 6 p. m., 54° F.; clear.
September 29.—6 a. m., 50° F. Noon, 86° F. 6 p. m., 76° F.; clear.
September 30.—6 a. m., 42° F. Noon, 78° F. 6 p. m., 70° F.; clear.
October 1.—6 a. m., 46° F. Noon, 98° F. 6 p. m., 70° F.; clear.
October 2.—6 a. m., 59° F. Noon, 62° F. 6 p. m., 50° F.; clear.

General remarks.—Referring to yours of the 30th ult., relative to condition, etc., of the beets, would say, both pieces indicate ripeness, the lower leaves dying to some extent. The Klein Wanzlebener, however, are further along in ripeness than the Vilmorin Improved, and I should think the former would do to harvest the latter part of this present week or the first of next week. The Vilmorin Improved would not be ready to harvest for a week or so after the others. Both patches show the beginning of its growth of new leaves.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 82° F. Noon, 94° F. 6 p. m., 46° F.; clear.
October 4.—6 a. m., 32° F. Noon, 96° F. 6 p. m., 58° F.; clear.
October 5.—6 a. m., 34° F. Noon, 88° F. 6 p. m., 76° F.; clear.
October 6.—6 a. m., 56° F. Noon, 68° F. 6 p. m., 62° F.; rainfall, .10 in.; cloudy.
October 7.—6 a. m., 48° F. Noon, 50° F. 6 p. m., 44° F.; clear.
October 8.—6 a. m., 30° F. Noon, 58° F. 6 p. m., 59° F.; cloudy.
October 9.—6 a. m., 50° F. Noon, 62° F. 6 p. m., 54° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 30° F. Noon, 68° F. 6 p. m., 50° F.; clear.
October 11.—6 a. m., 54° F. Noon, 66° F. 6 p. m., 54° F.; cloudy.
October 12.—6 a. m., 68° F. Noon, 68° F. 6 p. m., 64° F.; rainfall, .45 in.; cloudy.
October 13.—6 a. m., 40° F. Noon, 66° F. 6 p. m., 52° F.; clear.
October 14.—6 a. m., 44° F. Noon, 86° F. 6 p. m., 70° F.; clear.
October 15.—6 a. m., 58° F. Noon, 90° F. 6 p. m., 82° F.; cloudy.
October 16.—6 a. m., 64° F. Noon, 88° F. 6 p. m., 80 °F.; clear.

General remarks.—The one hundred pounds of Vilmorin Improved shrunk to eighty-eight and one-half pounds, and the Klein Wanzlebener shrunk to eighty-one and one-half pounds; the former weighed nine thousand one hundred and thirty pounds and the latter weighed four thousand four hundred and thirty pounds. One reason why the former weighed more than the latter was because it was a larger piece of ground, but they seemed to have grown better and larger, when I came to harvest them. There is no doubt but beets can be grown in Cortland county, but they must be sowed earlier than the 3d of June. About the 15th of May is the time to sow them here. The beets had to be drawn one-half mile to be weighed.

L. D. TAYLOR,
Experimenter.

CORTLAND, N. Y., *October* 18, 1897.

An examination of the above shows that from the time of planting the seeds to the harvesting of the beets was 147 days; making 21 weeks; that the whole amount of rainfall in the whole time upon the beets was 12.53; that the average rainfall per month was 2.55; that the average rainfall per week was .637; and that the average rainfall per day was .085; that the number of days on which the sun shone was 77; that the number of cloudy days was 29; that the number of days on which it rained was 41; the kind of soil on which this patch of beets was raised was sandy loam, free of stone; the amount of beets raised upon the patch would indicate that that soil would raise 8.86 tons of Klein Wanzlebener per acre, and 18.26 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 12.74 percentage of sugar and the Vilmorin Improved 14.14 percentage of sugar. This would indicate that that soil would raise beets that would produce 3083.28 lbs. of sugar per acre from the Klein Wanzlebener and 5163.93 lbs. of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 6.

REPORT FOR WEEK ENDING JUNE 12, 1897.

General remarks.—Beet seed received June 4th; phosphate not received until June 5th; rain June 7th, 8th, 9th; total fall, 1.55 inch; beets planted June 11th. **Expenses:** Plowing, drilling and planting, $2.75; freight on phosphate, 90 cents.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 68° F. Noon, 82° F 6 p. m., 76° F.; sunshine.

June 14.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 72° F.; sunshine.

June 15.—6 a. m., 70° F. Noon, 74° F. 6 p. m., 76° F.; sunshine.

June 16.—6 a. m., 62° F.; sunshine. Noon, 72° F. 6 p. m., 60° F.; cloudy.

June 17.—6 a. m., 61° F. Noon, 74° F. 6 p. m., 62° F.; cloudy.

June 18.—6 a. m., 67° F. Noon, 75° F. 6 p. m., 70° F.; sunshine.

June 19.—6 a. m., 70° F.; sunshine. Noon, 81° F.; partly cloudy. 6 p. m., 60° F.; cloudy.

General remarks.—The week has been dry and cool.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 60° F.; cloudy Noon, 62° F. 6 p. m., 60° F.; clear.

June 21.—6 a. m., 51° F. Noon, 62° F. 6 p. m., 61° F.; clear; continued drought prevents any rapid growth.

June 22.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 78° F.; clear.

June 23.—6 a. m., 68° F.; clear. Noon, 88° F.; part cloudy. 6 p. m., 82° F.; clear.

June 24.—6 a. m., 74° F. Noon, 90° F.; clear. 6 p. m., 74° F.; part cloudy.

June 25.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 72° F.; clear.

June 26.—6 a. m., 56° F. Noon, 68° F. 6 p. m., 64° F.; clear.

General remarks.—Beets came up very even, and have been weeded once. We need rain very badly to get best results, having had none since the beets were planted; the land is very dry.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 68° F. Noon, 74° F. 6 p. m., 70° F.; clear.

June 28.—6 a. m., 56° F. Noon, 78° F.; clear. 6 p. m., 72° F.; part cloudy.

June 29.—6 a. m., 69° F. Noon, 78° F.; rainfall, .45 in.; part cloudy. 6 p. m., 66° F.; clear.

June 30.—6 a. m., 66° F.; cloudy. Noon, 74° F.; part cloudy. 6 p. m., 70° F.; clear.

July 1.—6 a. m., 64° F.; part cloudy. Noon, 92° F.; clear. 6 p. m., 78° F.; cloudy.

July 2.—6 a. m., 66° F. Noon, 82° F.; clear. 6 p. m., 80° F.; part cloudy.

July 3.—6 a. m., 78° F. Noon, 90° F. 6 p. m., 82° F.; clear.

REPORT FOR WEEK ENDING JULY 10, 1897

July 4.—6 a. m., 92° F. Noon, 104° F. 6 p. m., 98° F.; clear.

July 5.—6 a. m., 86° F. Noon, 104° F. 6 p. m., 96° F.; clear.

July 6.—6 a. m., 76° F.; part cloudy. Noon, 98° F. 6 p. m., 88° F.; clear.

July 7.—6 a. m., 76° F. Noon, 92° F. 6 p. m., 74° F.; clear.

July 8.—6 a. m., 72° F. Noon, 100° F. 6 p. m., 96° F.; clear.

July 9.—6 a. m., 80° F. Noon, 100° F. 6 p. m., 94° F.; clear.

July 10.—6 a. m., 74° F. Noon, 104° F. 6 p. m., 92° F.; clear.

General remarks.—For ten days beets have been making no progress; the continued drought and hot winds are burning up all vegetation; while there are showers around us, we have had only .45 of one inch of rainfall since planting.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 82° F.; clear. Noon, 98° F.; cloudy. 6 p. m., 88° F.; rainfall, 1.40 in.; rain.

July 12.—6 a. m., 66° F.; cloudy. Noon, 70° F.; part cloudy. 6 p. m., 72° F.; clear.

July 13.—6 a. m., 66° F.; cloudy. Noon, 80° F. 6 p. m., 74° F.; clear.

July 14.—6 a. m., 64° F.; cloudy. Noon, 78° F.; clear. 6 p. m., 72° F.; part cloudy.

July 15.—6 a. m., 78° F. Noon, 84° F. 6 p. m., 72° F.; clear.

July 16.—6 a. m., 62° F.; clear. Noon, 90° F. 6 p. m., 78° F.; cloudy.

July 17.—6 a. m., 62° F. Noon, 84° F. 6 p. m., 80° F.; clear.

General remarks.—July 13th, seven days, weeding, at 60 cents, $4.20; July 13th, one day, weeding, $1.25; July 15th, two days, transplanting and weeding, at 50 cents, $1; July 16th, two days, transplanting and weeding, at 50 cents, $1; July 17th, one day, transplanting and weeding, 50 cents; total expense for week, $7.75. The crop received great benefit from the rain of July 11th.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 76° F. Noon, 80° F.; clear. 6 p. m., 68° F.; cloudy.

July 19.—6 a. m., 80° F. Noon, 90° F. 6 p. m., 82° F.; cloudy.

July 20.—6 a. m., 68° F.; cloudy. Noon, 82° F. 6 p. m., 80° F.; clear.

July 21.—6 a. m., 74° F. Noon, 90° F. 6 p. m., 86° F.; clear.

July 22.—6 a. m., 72° F.; cloudy. Noon, 90° F. 6 p. m., 88° F.; rainfall, .25 in.; clear.

July 23.—6 a. m., 80° F.; cloudy. Noon, 72° F.; partly cloudy. 6 p. m., 68° F.; rainfall, .20 in.; clear.

July 24.—6 a. m., 68° F.; cloudy. Noon, 80° F.; clear. 6 p. m., 76° F.; rainfall, .30 in.; cloudy.

General remarks.—To hand hoeing and weeding, four days at 60 cents per day, $2.40; one day, $1.25; total, $3.65.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 72° F.; partly cloudy; rainfall, trace. Noon, 82° F. 6 p. m., 78° F.; clear.

July 26.—6 a. m., 70° F.; cloudy. Noon, 82° F.; rainfall, .30 in. 6 p. m., 84° F.; partly cloudy.

July 27.—6 a. m., 64° F. Noon, 78° F.; rainfall, 1 in. 6 p. m., 66° F.; partly cloudy.

July 28.—6 a. m., 64° F.; cloudy. Noon, 70° F.; rainfall, .18 in.; part cloudy. 6 p. m., 64° F.; clear.

July 29.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 62° F.; rainfall, .28 in.; cloudy.

July 30.—6 a. m., 62° F. Noon, 74° F.; cloudy. 6 p. m., 70° F.; clear.

July 31.—6 a. m., 70° F. Noon, 84° F. 6 p. m., 76° F.; clear.

General remarks.—To two days work in beets, $2.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 70° F. Noon, 84° F. 6 p. m., 76° F.; clear.

August 2.—6 a. m., 68° F.; clear. Noon, 80° F.; partly cloudy. 6 p. m., 74° F.; clear.

August 3.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 76° F.; clear.

August 4.—6 a. m., 68° F. Noon, 86° F. 6 p. m., 74° F.; clear.

August 5.—6 a. m., 70° F. Noon, 82° F.; clear. 6 p. m., 72° F.; part cloudy.

August 6.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 72° F.; clear.

August 7.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 76° F.; clear.

General remarks.—Beets making rapid growth. August 3d, one day hoeing, $1; August 5th, one day hoeing, $1; total, $2.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 72° F. Noon, 88° F. 6 p. m., 78° F.; clear.

August 9.—6 a. m., 66° F. Noon, 84° F. 6 p. m., 70° F.; clear.

August 10.—6 a. m., 62° F.; partly cloudy. Noon, 80° F. 6 p. m., 68° F.; clear.

August 11.—6 a. m., 80° F. Noon, 72° F. 6 p. m., 60° F.; clear.

August 12.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 44° F.; clear.

August 13.—6 a. m., 58° F. Noon, 74° F. 6 p. m., 68° F.; clear.

August 14.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 74° F.; clear.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 74° F.; clear.

August 16.—6 a. m., 64° F.; clear. Noon, 72° F.; cloudy. 6 p. m., 66° F.; clear.

August 17.—6 a. m., 62° F. Noon, 72° F. 6 p. m., 58° F.; clear.

August 18.—6 a. m., 56° F.; part cloudy. Noon, 72° F. 6 p. m., 68° F.; clear.

August 19.—6 a. m., 58° F.; rainfall, .55 in.; Noon, 60° F. 6 p. m., 58° F.; part cloudy.

August 20.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 64° F.; clear.

August 21.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 70° F. Noon, 78° F. 6 p. m., 60° F.; clear.

August 23.—6 a. m., 54° F. Noon, 68° F.; partly cloudy. 6 p. m., 62° F.; clear.

August 24.—6 a. m., 52° F.; partly cloudy. Noon, 72° F. 6 p. m., 70° F.; clear.

August 25.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 68° F.; clear.

August 26.—6 a. m., 54° F. Noon, 68° F. 6 p. m., 52° F.; clear.

August 27.—6 a. m., 52° F. Noon, 80° F. 6 p. m., 74° F.; clear.

August 28.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 68° F.; clear.

General remarks.—Beets making fair growth, though rain is needed badly.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 74° F.; clear. Noon, 80° F. 6 p. m., 76° F.; part cloudy.

August 30.—6 a. m., 56° F. Noon, 70° F.; partly cloudy. 6 p. m., 66° F.; clear.

August 31.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 66° F.; clear.

September 1.—6 a. m., 64° F.; rainfall, .22 in. Noon, 72° F. 6 p. m., 68° F.; part cloudy.

September 2.—6 a. m., 62° F. Noon, 70° F. 6 p. m., 64° F.; clear.

September 3.—6 a. m., 46° F. Noon, 78° F. 6 p. m., 58° F.; clear.

September 4.—6 a. m., 38° F. Noon, 74° F. 6 p. m., 66° F.; clear; frost.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 52° F. Noon, 82° F. 6 p. m., 64° F.; clear.

September 6.—6 a. m., 66° F. Noon, 86° F. 6 p. m., 78° F.; clear.

September 7.—6 a. m., 68° F. Noon, 76° F. 6 p. m., 68° F.; clear.

September 8.—6 a. m., 58° F.; part cloudy. Noon, 62° F. 6 p. m., 70° F.; clear.

September 9.—6 a. m., 60° F. Noon, 90° F. 6 p. m., 88° F.; clear.

September 10.—6 a. m., 76° F. Noon, 94° F. 6 p. m., 90° F.; clear.

September 11.—6 a. m., 66° F. Noon, 76° F.; clear. 6 p. m., 64° F.; cloudy.

General remarks.—Beets showing remarkable growth when the long-continued drought is taken into consideration.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 58° F.; cloudy. Noon, 62° F. 6 p. m., 54° F.; part cloudy.

September 20.—6 a. m., 44° F. Noon, 50° F. 6 p. m., 46° F.; cloudy.

September 21.—6 a. m., 42° F.; cloudy. Noon, 48° F. 6 p. m., 50° F.; clear.

September 22.—6 a. m., 40° F. Noon, 68° F. 6 p. m., 60° F.; clear.

September 23.—6 a. m., 48° F.; cloudy. Noon, 60° F.; clear. 6 p. m., 48° F.; cloudy.

September 24.—6 a. m., 46° F. Noon, 68° F.; clear. 6 p. m., 54° F.; part cloudy.

September 25.—6 a. m., 50° F. Noon, 62° F.; clear. 6 p. m., 48° F.; rainfall, .15 in.; cloudy.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 48° F. Noon, 60° F.; clear. 6 p. m., 52° F.; part cloudy.

September 27.—6 a. m., 46° F.; part cloudy. Noon, 52° F.; clear. 6 p. m., 44° F.; cloudy.

September 28.—6 a. m., 40° F.; cloudy. Noon, 54° F. 6 p. m., 46° F.; clear.

September 29.—6 a. m., 38° F.; cloudy. Noon, 52° F.; part cloudy. 6 p. m., 44° F.; clear.

September 30.—6 a. m., 38° F. Noon, 54° F.; clear. 6 p. m., 44° F.; part cloudy.

October 1.—6 a. m., 40° F.; cloudy. Noon, 56° F. 6 p. m., 44° F.; clear.

October 2.—6 a. m., 48° F. Noon, 60° F. 6 p. m., 46° F.; clear.

General remarks.—The under leaves of beets are green; no new growth on crown; will be easily two weeks before beets should be harvested.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 43° F. Noon, 64° F.; part cloudy. 6 p. m., 50° F.; clear.

October 4.—6 a. m., 46° F.; clear. Noon, 71° F.; cloudy. 6 p. m., 66° F.; part cloudy.

October 5.—6 a. m., 50° F. Noon, 59° F.; clear. 6 p. m., 50° F.; part cloudy.

October 6.—6 a. m., 52° F. Noon, 64° F.; part cloudy. 6 p. m., 51° F.; clear.

October 7.—6 a. m., 46° F. Noon, 59° F. 6 p. m., 37° F.; clear.

October 8.—6 a. m., 30° F. Noon, 55° F.; clear. 6 p. m., 50° F.; part clear.

October 9.—6 a. m., 40° F. Noon, 46° F. 6 p. m., 30° F.; part cloudy.

General remarks.—Very dry and beets showing signs of ripening.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 45° F. Noon, 55° F. 6 p. m., 45° F.; clear.

October 11.—6 a. m., 41° F. Noon, 69° F. 6 p. m., 63° F.; clear.

October 12.—6 a. m., 64° F. Noon, 65° F. 6 p. m., 55° F.; clear.

October 13.—6 a. m., 38° F.; clear. Noon, 50° F.; partly cloudy; 6 p. m., 44° F.; clear.
October 14.—6 a m., 44° F. Noon, 76° F. 6 p. m., 63° F.; clear.
October 15.—6 a. m., 40° F. Noon, 72° F.; part cloudy. 6 p. m., 56° F.; clear.
October 16.—6 a. m., 52° F. Noon, 82° F. 6 p. m., 56° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

General remarks.—Beets harvested October 20th and 21st; weighed about fifty pounds of each variety and expressed to Geneva. Total weight after tops were removed, seven tons three hundred and fifty-five pounds. Vilmorin Improved from one-fourth acre, after removing tops, four tons. Topping, 12 per cent. waste. Klein Wanzlebener, three tons three hundred and fifty-five pounds, after tops were removed. Topping, 15 per cent. waste. This crop was raised on probably as high and dry field as there is in the town; crop planted late and injured by the prolonged drought; I shall plant ten acres next year.

GEO. M. GILLETTE,
Experimenter.

BERGEN, N. Y., *October 25, 1897.*

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 135 days, making 19 3-7 weeks; that the whole amount of rainfall in the whole time upon the beets was 5.28 inches; that the average rainfall per month was .9 inch; that the average rainfall per week was .21 inch; and that the average rainfall per day was .03 inch; that the number of days on which the sun shone was 59; that the number of cloudy days was 51; that the number of days on which it rained was 13; the amount of beets raised upon the patch would indicate that that soil would raise 12.71 tons of Klein Wanzlebener per acre and 16 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 12.8 percentage of sugar and the Vilmorin Improved 13.4 percentage of sugar. This would indicate that that soil would raise beets that would produce 3,253.76 lbs. of sugar per acre from the Klein Wanzlebener and 4,288 lbs. of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH NO. 7.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 79° F. Noon, 96° F. 6 p. m., 90° F.
July 5.—6 a. m., 70° F. Noon, 96° F. 6 p. m., 91° F.
July 6.—6 a. m., 84° F. Noon, 95° F. 6 p. m., 81° F.
July 7.—6 a. m., 84° F. Noon, 98° F. 6 p. m., 84° F.
July 8.—6 a. m., 66° F. Noon, 100° F. 6 p. m., 88° F.
July 9.—6 a. m., 80° F. Noon, 95° F. 6 p. m., 84° F.
July 10.—6 a. m., 89° F. Noon, 101° F. 6 p. m., 96° F.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 84° F.; rainfall, .7 in. Noon, 91° F. 6 p. m., 81° F.

July 12.—6 a. m., 58° F. Noon, 60° F. 6 p. m., 60° F.

July 13.—6 a. m., 60° F. Noon, 66° F. 6 p. m., 58° F.

July 14.—6 a. m., 70° F.; rainfall, .1 in. Noon, 89° F. 6 p. m., 68° F.

July 15.—6 a. m., 71° F. Noon, 86° F. 6 p. m., 69° F.

July 16.—6 a. m., 80° F. Noon, 86° F. 6 p. m., 60° F.

July 17.—6 a. m., 68° F. Noon, 70° F. 6 p. m., 62° F.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 73° F. Noon, 91° F. 6 p. m., 74° F.

July 19.—6 a. m., 74° F. Noon, 89° F. 6 p. m., 68° F.

July 20.—6 a. m., 69° F.; rainfall, .5 in. Noon, 86° F. 6 p. m., 63° F.

July 21.—6 a. m., 68° F. Noon, 85° F. 6 p. m., 70° F.

July 22.—6 a. m., 68° F. Noon, 89° F. 6 p. m., 65° F.

July 23.—6 a. m., 69° F. Noon, 71° F. 6 p. m., 68° F.

July 24.—6 a. m., 68° F.; rainfall, .1 in. Noon, 83° F. 6 p. m., 68° F.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 71° F. Noon, 68° F. 6 p. m., 67° F.

July 26.—6 a. m., 79° F. Noon, 65° F 6 p. m., 60° F.

July 27.—6 a. m., 58° F. Noon, 60° F. 6 p. m., 58° F.

July 28.—6 a. m., 52° F.; rainfall, .5 in. Noon, 68° F. 6 p. m., 60° F.

July 29.—6 a. m., 58° F.; rainfall, .1 in. Noon, 67° F. 6 p. m., 60° F.

July 30.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 70° F.

July 31.—6 a. m., 61° F.; rainfall, .1 in. Noon, 91° F. 6 p. m., 62° F.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 64° F. Noon, 68° F. 6 p. m., 62° F.; clear.

August 2.—6 a. m., 80° F. Noon, 102° F. 6 p. m., 60° F.; clear.

August 3.—6 a. m., 98° F. Noon, 104° F. 6 p. m., 70° F.; clear.

August 4.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 62° F.; clear.

August 5.—6 a. m., 60° F. Noon, 86° F. 6 p. m., 58° F.; clear.

August 6.—6 a. m., 90° F. Noon, 102° F. 6 p. m., 62° F.; clear; beets 5½ in. in diameter.

August 7.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 70° F.; clear; beets 16 inches.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 76° F. Noon, 104° F. 6 p. m., 70° F.; clear.

August 9.—6 a. m., 78° F. Noon, 98° F. 6 p. m., 70° F.; clear.

August 10.—6 a. m., 60° F. Noon, 58° F. 6 p. m., 56° F.; rainfall, 1.1 in.; cloudy.

August 11.—6 a. m., 70° F. Noon, 78° F. 6 p. m., 68° F.; cloudy.

August 12.—6 a. m., 68° F. Noon, 70° F. 6 p. m., 62° F.; cloudy.

August 13.—6 a. m., 70° F. Noon, 82° F.; rainfall, .2 in. 6 p. m., 68° F.; clear; beets 18 inches high.

August 14.—6 a. m., 62° F. Noon, 88° F. 6 p. m., 78° F.; clear; beets 6 in. in diameter.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 62° F. Noon, 84° F. 6 p. m., 72° F.; rainfall, 2.2 in.; partly cloudy.

August 16.—6 a. m., 68° F. Noon, 74° F. 6 p. m., 68° F.; partly cloudy.

August 17.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 58° F.; cloudy.

August 18.—6 a. m., 54° F. Noon, 66° F. 6 p. m., 58° F.; clear.

August 19.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 60° F.; partly clear.

August 20.—6 a. m., 68° F. Noon, 72° F. 6 p. m., 58° F.; clear.

August 21.—6 a. m., 58° F. Noon, 80° F. 6 p. m., 57° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 66° F. Noon, 90° F. 6 p. m., 60° F.; clear.

August 23.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 56° F.; clear.

August 24.—6 a. m., 58° F. Noon, 70° F. 6 p. m., 60° F.; cloudy.

August 25.—6 a. m., 54° F. Noon, 70° F. 6 p. m., 62° F.; rainfall, .5 in.; cloudy.

August 26.—6 a. m., 70° F. Noon, 86° F. 6 p. m., 58° F.; clear.

August 27.—6 a. m., 60° F. Noon, 82° F. 6 p. m., 64° F.; clear.

August 28.—6 a. m., 66° F. Noon, 92° F. 6 p. m., 62° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 64° F. Noon, 72° F.; rainfall, .1 in. 6 p. m., 60° F.; clear.

August 30.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 66° F.; clear.

August 31.—6 a. m., 52° F. Noon, 66° F. 6 p. m., 60° F.; clear.

September 1.—6 a. m., 62° F. Noon, 72° F. 6 p. m., 62° F.; clear.

September 2.—6 a. m., 68° F. Noon, 74° F. 6 p. m., 64° F.; clear.

September 3.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 62° F.; clear.

September 4.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 56° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 60° F. Noon, 82° F. 6 p. m., 74° F.; clear.

September 6.—6 a. m., 70° F. Noon, 104° F. 6 p. m., 72° F.; clear.

September 7.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 70° F.; rainfall, .2 in.; cloudy.

September 8.—6 a. m., 66° F. Noon, 94° F. 6 p. m., 72° F.; clear.

September 9.—6 a. m., 68° F. Noon, 96° F. 6 p. m., 70° F.; clear.

September 10.—6 a. m., 70° F. Noon, 98° F. 6 p. m., 76° F.; clear.

September 11.—6 a. m., 74° F. Noon, 90° F. 6 p. m., 58° F.; cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 52° F. Noon, 64° F. 6 p. m., 50° F.; clear.

September 13.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 52° F.; clear.

September 14.—6 a. m., 58° F. Noon, 64° F. 6 p. m., 54° F.; cloudy.

September 15.—6 a. m., 58° F. Noon, 99° F. 6 p. m., 68° F.; clear.

September 16.—6 a. m., 60° F. Noon, 100° F. 6 p. m., 68° F.; clear.

September 17.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 54° F.; cloudy.

September 15.—6 a. m., 58° F. Noon, 99° F. 6 p. m., 68° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 58° F. Noon, 70° F. 6 p. m., 60° F.; clear.

September 20.—6 a. m., 48° F. Noon, 60° F. 6 p. m., 50° F.; cloudy.

September 21.—6 a. m., 46° F. Noon, 56° F. 6 p. m., 50° F.; clear.

September 22.—6 a. m., 46° F. Noon, 62° F. 6 p. m., 52° F.; clear.

September 23.—6 a. m., 42° F. Noon, 74° F. 6 p. m., 56° F.; clear.

September 24.—6 a. m., 52° F. Noon, 60° F. 6 p. m., 56° F.; rainfall, .5 in.; cloudy.

September 25.—6 a. m., 52° F. Noon, 60° F. 6 p. m., 62° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 52° F. Noon, 64° F. 6 p. m., 50° F.; rainfall, .5 in.

September 27.—6 a. m., 42° F. Noon, 60° F. 6 p. m., 50° F.

September 28.—6 a. m., 32° F. Noon, 68° F. 6 p. m., 40° F.

September 29.—6 a. m., 38° F. Noon, 74° F. 6 p. m., 58° F.

September 30.—6 a. m., 70° F. Noon, 88° F. 6 p. m., 56° F.

October 1.—6 a. m., 62° F. Noon, 74° F. 6 p. m., 56° F.

October 2.—6 a. m., 60° F. Noon, 88° F. 6 p. m., 54° F.

General remarks.—Think beets fit to harvest; average from root to top thirty-two to thirty-eight inches; average in diameter from four to seven inches; think frost has hurt tops.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 56° F.; clear.
October 4.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 62° F.; clear.
October 5.—6 a. m., 42° F. Noon, 48° F. 6 p. m., 40° F.; clear.
October 6.—6 a. m., 44° F. Noon, 50° F. 6 p. m., 42° F.; cloudy.
October 7.—6 a. m., 40° F. Noon, 46° F. 6 p. m., 40° F.; clear.
October 8.—6 a. m., 38° F. Noon, 46° F. 6 p. m., 40° F.; clear.
October 9.—6 a. m., 32° F. Noon, 58° F. 6 p. m., 50° F.; clear.

General remarks.—Second growth of leaves are commencing to grow on beets.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 58° F. Noon, 94° F. 6 p. m., 56° F.; clear.
October 11.—6 a. m., 56° F. Noon, 74° F. 6 p. m., 60° F.; clear.
October 12.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 50° F.; rainfall, .5 in.; cloudy.
October 13.—6 a. m., 40° F. Noon, 72° F. 6 p. m., 44° F.; clear.
October 14.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 64° F.; clear.
October 15.—6 a. m., 64° F. Noon, 98° F. 6 p. m., 98° F.; clear.
October 16.—6 a. m., 54° F. Noon, 69° F. 6 p. m., 40° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 30° F. Noon, 48° F. 6 p. m., 32° F.; clear.
October 18.—6 a. m., 42° F. Noon, 60° F. 6 p. m., 32° F.; clear.
October 19.—6 a. m., 48° F. Noon, 72° F. 6 p. m., 30° F.; clear.
October 20.—6 a. m., 40° F. Noon, 64° F. 6 p. m., 32° F.; clear.
October 21.—6 a. m., 44° F. Noon, 72° F. 6 p. m., 34° F.; cloudy.
October 22.—6 a. m., 36° F. Noon, 62° F. 6 p. m., 46° F.; cloudy.
October 23.—6 a. m., 36° F. Noon, 72° F. 6 p. m., 44° F.; clear.

General remarks.—The beets are harvested and ready to ship. A letter received to-day from Prof. Jordan asks that samples be shipped the 28th. Will comply with his request unless otherwise ordered.

WILL GILLIGAN,
Experimentor.

LOWVILLE, N. Y., *October 23, 1897.*

An examination of the above report shows that the whole amount of rainfall in the whole time upon the beets was 6.5; that the average rainfall per month was 1.625; that the average rainfall per week was .5416; and that the average rainfall per day was .0773; the amount of beets raised upon the patch would indicate that that soil would raise 4.77 tons of Klein Wanzlebener per acre and 5.75 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 15.08 per centage of sugar and the Vilmorin Improved 14.6 percentage of sugar. This would indicate that that soil would raise beets that would produce 1,440.44 lbs. of sugar per acre from the Klein Wanzlebener, and 1,679.58 lbs. of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

This man did not keep records as instructed.

PATCH NO. 8.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 19.—6 a. m., 54° F. Noon, 82° F. 6 p. m., 70° F.; cloudy.

June 17.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 72° F.; partly cloudy.

June 18.—6 a. m., 52° F. Noon, 78° F. 6 p. m., 69° F.; clear.

June 19.—6 a. m., 54° F. Noon, 82° F. 6 p. m., 70° F.; cloudy; 2 inches.

General remarks.—I plowed my ground about ten inches deep and about eight inches wide; then harrowed twice over; then sowed broadcast 500 pounds of phosphate that you sent me; then harrowed it in once over with a spring-tooth harrow, and once over with a smoothing harrow; marked twenty inches wide; sowed with a seeder. I did not get the blanks until Wednesday so I could make a report for only three days last week. Plowing and dragging, $2.80; sowing phosphate and beets, $1.20; postage, 4 cents.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 62° F. Noon, 68° F. 6 p. m., 60° F.; rainfall, .1 in.; cloudy.

June 21.—6 a. m., 48° F. Noon, 69° F. 6 p. m., 60° F.; clear.

June 22.—6 a. m., 49° F. Noon, 84° F. 6 p. m., 60° F.; clear.

June 23.—6 a. m., 66° F. Noon, 86° F. 6 p. m., 70° F.; partly cloudy.

June 24.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 70° F.; rainfall, .1 in.; cloudy.

June 25.—6 a. m., 73° F. Noon, 90° F. 6 p. m., 78° F.; clear.

June 26.—6 a. m., 58° F. Noon, 74° F. 6 p. m., 62° F.; clear; beets 3 inches high.

General remarks.—The beets are looking very nicely, but they did not all come up; there are some spaces that are without plants; I shall transplant in as soon as the ground will permit. Cultivating, four hours, 60 cents; cultivating, five hours, 75 cents; hoed with wheel hoe, $1.50.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 58° F. Noon, 70° F. 6 p. m., 68° F.; partly cloudy.

June 28.—6 a. m., 59° F. Noon, 78° F. 6 p. m., 69° F.; clear.

June 29.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 71° F.; rainfall, 1.8 in.; rainy.

June 30.—6 a. m., 64° F. Noon, 80° F. 6 p. m., 71° F.; cloudy.

July 1.—6 a. m., 63° F. Noon, 89° F. 6 p. m., 78° F.; partly cloudy.

July 1.—6 a. m., 54° F. Noon, 83° F. 6 p. m., 78° F.; partly cloudy.

July 3.—6 a. m., 61° F. Noon, 106° F. 6 p. m., 82° F.; clear.

General remarks.—Weeding and hoeing, 20 hours, $2; weeding and hoeing, 20 hours, $2; transplanting, 40 hours, $4; hoeing and thinning, 13 hours, $1.30; cultivating, 10 hours, $1; chopping out, 10 hours, $1.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 70° F. Noon, 98° F. 6 p. m., 90° F.; clear.

July 5.—6 a. m., 70° F. Noon, 110° F. 6 p. m., 84° F.; partly cloudy.

July 6.—6 a. m., 75° F. Noon, 96° F. 6 p. m., 80° F.; rainfall, .25 in.; rainy.

July 7.—6 a. m., 70° F. Noon, 109° F. 6 p. m., 98° F.; partly cloudy.

July 8.—6 a. m., 79° F. Noon, 98° F. 6 p. m., 80° F.; clear.

July 9.—6 a. m., 80° F. Noon, 107° F. 6 p. m., 84° F.; partly cloudy.

July 10.—6 a. m., 72° F. Noon, 108° F. 6 p. m., 90° F.; clear.

General remarks.—Thinning, 10 hours, $1; cultivating, 6 hours, 60 cents; thinning, 10 hours, $1.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 76° F. Noon, 92° F. 6 p. m., 78° F.; clear.

July 12.—6 a. m., 67° F. Noon, 69° F. 6 p. m., 63° F.; rainfall, 1.5 in.; rainy.

July 13.—6 a. m., 66° F. Noon, 74° F. 6 p. m., 73° F.; cloudy; beets 8 inches high.

July 14.—6 a. m., 69° F. Noon, 80° F. 6 p. m., 76° F.; rainfall, 1 in.

July 15.—6 a. m., 60° F. Noon, 86° F. 6 p. m., 74° F.; clear.

July 16.—6 a. m., 57° F. Noon, 82° F. 6 p. m., 76° F.; partly cloudy.

July 17.—6 a. m., 74° F. Noon, 83° F. 6 p. m., 79° F.; cloudy; beets from 10 to 12 inches high.

General remarks.—The beets are looking fine; they are nearly out of the way until harvest. Thinning, 22 hours, $2.20; cultivating, 6 hours, 60 cents.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 72° F.; cloudy.

July 19.—6 a. m., 71° F. Noon, 88° F. 6 p. m., 78° F.; partly cloudy.

July 20.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 77° F.; rainfall, .3 in.

July 21.—6 a. m., 69° F. Noon, 85° F. 6 p. m., 73° F.; cloudy.

July 22.—6 a. m., 68° F. Noon, 92° F. 6 p. m., 71° F.; partly cloudy.

July 23.—6 a. m., 69° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .1 in.; cloudy.

July 24.—6 a. m., 64° F. Noon, 87° F. 6 p. m., 76° F.; rainfall, .8 in.

General remarks.—The beets nearly cover the ground; I don't think there will be any more to do to them until harvested. Pulling weeds, 5 hours, 50 cents; pulling weeds, 15 hours, $1.50.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 75° F. Noon, 80° F. 6 p. m., 78° F.; rainfall, .1 in.

July 26.—6 a. m., 71° F. Noon, 79° F. 6 p. m., 63° F.; cloudy.

July 27.—6 a. m., 57° F. Noon, 60° F. 6 p. m., 59° F.; rainfall, .4 in.

July 28.—6 a. m., 55° F. Noon, 60° F. 6 p. m., 52° F.; rainfall, .3 in.

July 29.—6 a. m., 56° F. Noon, 79° F. 6 p. m., 67° F.; rainfall, .4 in.

July 30.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 72° F.; rainfall, .5 in.

July 31.—6 a. m., 64° F. Noon, 81° F. 6 p. m., 72° F.; cloudy.

General remarks.—Beets are looking fine.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 71° F. Noon, 79° F. 6 p. m., 68° F.; clear.

August 2.—6 a. m,. 68° F. Noon, 81° F. 6 p. m., 72° F.; clear.

August 3.—6 a. m., 71° F. Noon, 90° F. 6 p. m., 78° F.; clear.

August 4.—6 a. m., 72° F. Noon, 101° F. 6 p. m., 78° F.; clear.

August 5.—6 a. m., 73° F. Noon, 93° F. 6 p. m., 71° F.; clear.

August 6.—6 a. m., 52° F. Noon, 93° F.; clear.

August 7.—6 a. m., 54° F. Noon, 89° F. 6 p. m., 70° F.; partly cloudy.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 61° F. Noon, 98° F. 6 p. m., 71° F.; partly cloudy.

August 9.—6 a. m., 69° F. Noon, 98° F. 6 p. m., 73° F.; clear.

August 10.—6 a. m., 65° F. Noon, 88° F. 6 p. m., 79° F.; cloudy.

August 11.—6 a. m., 59° F. Noon, 80° F. 6 p. m., 72° F.; rainfall, .4 in.

August 12.—6 a. m., 61° F. Noon, 79° F. 6 p. m., 60° F.; partly cloudy.

August 13.—6 a. m., 54° F. Noon, 81° F. 6 p. m., 68° F.; clear.

August 14.—6 a. m., 55° F. Noon, 94° F. 6 p. m., 71° F.; partly cloudy.

General remarks.—The beets seem to do nicely; there is a very heavy growth of top; the root is growing in diameter very fast.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 68° F. Noon, 91° F. 6 p. m., 72° F.; partly cloudy.

August 16.—6 a. m., 61° F. Noon, 82° F. 6 p. m., 66° F.; rainfall, .4 in.; cloudy.

August 17.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 61° F.; cloudy.

August 18.—6 a. m., 52° F. Noon, 78° F. 6 p. m., 68° F.; partly cloudy.

August 19.—6 a. m., 59° F. Noon, 80° F. 6 p. m., 71° F.; rainfall, .1 in.

August 20.—6 a. m., 56° F. Noon, 86° F. 6 p. m., 71° F.; clear.

August 21.—6 a. m., 46° F. Noon, 82° F. 6 p. m., 77° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 70° F. Noon, 91° F. 6 p. m., 78° F.; clear.

August 23.—6 a. m., 56° F. Noon, 81° F. 6 p. m., 61° F.; cloudy.

August 24.—6 a. m., 63° F. Noon, 82° F. 6 p. m., 81° F.; cloudy.

August 25.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 68° F.; rainfall, 1.1 in.

August 26.—6 a. m., 48° F. Noon, 81° F. 6 p. m., 68° F.; clear.

August 27.—6 a. m., 49° F. Noon, 80° F. 6 p. m., 71° F.; clear.

August 28.—6 a. m., 50° F. Noon, 82° F. 6 p. m., 71° F.; clear.

General remarks.—The beets are doing well; the weeds got up through the beets again and they looked bad so I pulled them all out; they look fine now.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 52° F. Noon, 79° F. 6 p. m., 68° F.; partly cloudy.

August 30.—6 a. m., 58° F. Noon, 82° F. 6 p. m., 73° F.; partly cloudy.

August 31.—6 a. m., 49° F. Noon, 88° F. 6 p. m., 72° F.; clear.

September 1.—6 a. m., 63° F. Noon, 90° F. 6 p. m., 72° F.; rainfall, .1 in.; cloudy.

September 2.—6 a. m., 51° F. Noon, 89° F. 6 p. m., 70° F.; clear.

September 3.—6 a. m., 54° F. Noon, 80° F. 6 p. m., 60° F.; clear.

September 4.—6 a. m., 54° F. Noon, 90° F. 6 p. m., 69° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 54° F. Noon, 89° F. 6 p. m., 71° F.; clear.

September 6.—6 a. m., 50° F. Noon, 100° F. 6 p. m., 73° F.; clear.

September 7.—6 a. m., 63° F. Noon, 90° F. 6 p. m., 71° F.; partly cloudy.

September 8.—6 a. m., 61° F. Noon, 101° F. 6 p. m., 71° F.; clear.

September 9.—6 a. m., 68° F. Noon, 99° F. 6 p. m., 71° F.; clear.

September 10.—6 a. m., 60° F Noon, 100° F. 6 p. m., 78° F.; clear.

September 11.—6 a. m., 61° F. Noon, 100° F. 6 p. m., 73° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 78° F. Noon, 91° F. 6 p. m., 87° F.; partly cloudy.

September 13.—6 a. m., 63° F. Noon, 81° F. 6 p. m., 61° F.; rainfall, .4 in.

September 14.—6 a. m., 40° F. Noon, 82° F. 6 p. m., 63° F.; clear.

September 15.—6 a. m., 51° F. Noon, 90° F. 6 p. m., 71° F.; clear.

September 16.—6 a. m., 79° F. Noon, 98° F. 6 p. m., 70° F.; rainfall, .6 in.

September 17.—6 a. m., 73° F. Noon, 89° F. 6 p. m., 70° F.; clear.

September 18.—6 a. m., 77° F. Noon, 82° F. 6 p. m., 63° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 49° F. Noon, 81° F. 6 p. m., 63° F.; cloudy.

September 20.—6 a. m., 31° F. Noon, 72° F. 6 p. m., 51° F.; cloudy.

September 21.—6 a. m., 38° F. Noon, 74° F. 6 p. m., 54° F.; clear.

September 22.—6 a. m., 63° F. Noon, 91° F. 6 p. m., 48° F.; clear.

September 23.—6 a. m., 49° F. Noon. 81° F. 6 p. m., 60° F.; partly cloudy.

September 24.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 63° F.; rainfall, 1 in.

September 25.—6 a. m., 64° F. Noon, 90° F. 6 p. m., 61° F.; clear.

General remarks.—The beets are very even; the tops are all green yet; the top of the root is about four inches through.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 58° F. Noon, 72° F. 6 p. m., 71° F.; rainfall, .1 in.

September 27.—6 a. m., 40° F. Noon, 70° F. 6 p. m., 60° F.; clear.

September 28.—6 a. m., 37° F. Noon, 57° F. 6 p. m., 40° F.; partly cloudy.

September 29.—6 a. m., 37° F. Noon, 81° F. 6 p. m., 54° F.; clear.

September 30.—6 a. m., 54° F. Noon, 99° F. 6 p. m., 61° F.; clear.

October 1.—6 a. m., 56° F. Noon, 92° F. 6 p. m., 61° F.; clear.

October 2.—6 a. m., 55° F. Noon, 71° F. 6 p. m., 50° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 26° F. Noon, 71° F. 6 p. m., 58° F.; clear.
October 4.—6 a. m., 28° F. Noon, 80° F. 6 p. m., 60° F.; clear.
October 5.—6 a. m., 30° F. Noon, 82° F. 6 p. m., 58° F.; clear.
October 6.—6 a. m., 49° F. Noon, 72° F. 6 p. m., 46° F.; partly clear.
October 7.—6 a. m., 47° F. Noon, 86° F. 6 p. m., 52° F.; partly clear.
October 8.—6 a. m., 22° F. Noon, 68° F. 6 p. m., 51° F.; clear.
October 9.—6 a. m., 36° F. Noon, 58° F. 6 p. m., 44° F.; partly clear.

General remarks.—The beets are very even and look very nice. I think they are as large as they will get; they look as though they had their growth and are ripe. I think they are ready to harvest any time you are ready for them.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 22° F. Noon, 61° F. 6 p. m., 49° F.; clear.
October 11.—6 a. m., 50° F. Noon, 78° F. 6 p. m., 64° F.; cloudy.
October 12.—6 a. m., 61° F. Noon, 70° F. 6 p. m., 50° F.; partly cloudy.
October 13.—6 a. m., 48° F. Noon, 71° F. 6 p. m., 60° F.; rainfall, .2 in.
October 14.—6 a. m., 32° F. Noon, 58° F. 6 p. m., 62° F.; partly cloudy.
October 15.—6 a. m., 68° F. Noon, 89° F. 6 p. m., 79° F.; clear.
October 16.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 69° F.; partly clear.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 38° F. Noon, 55° F. 6 p. m., 38° F.; clear.
October 18.—6 a. m., 20° F. Noon, 60° F. 6 p. m., 44° F.; clear.
October 19.—6 a. m., 30° F. Noon, 72° F. 6 p. m., 60° F.; partly cloudy.
October 20.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 48° F.; partly cloudy.
October 21.—6 a. m., 50° F. Noon, 61° F. 6 p. m., 50° F.; cloudy.
October 22.—6 a. m., 49° F. Noon, 61° F. 6 p. m., 42° F.; cloudy.

General remarks.—I finished harvesting beets October 23d. I had to transplant a good many of them; the tops grew well but when I came to pull them the root was very small and it made my weight fall short of what I estimated. The weights are as follows: Klein Wanzlebener, four tons one hundred and ninety pounds, or 8,190 pounds; the Vilmorin Improved, three tons eight hundred and ninety pounds, or 6,890 pounds. Gathering beets, 20 hours, $2; gathering beets, 22 hours, $2.20; gathering beets, 23 hours, $2.30; gathering beets, 23 hours, $2.30; gathering beets, 21 hours, $2.10.

E. O. MOREY,
Experimenter.

HAMILTON, N. Y., *October* 25, 1897.

An examination of the above reports shows that the whole amount of rainfall in the whole time upon the beets was 12.05; that the average rainfall per month was 2.82; that the average rainfall per week was .658; and that the average rainfall per day was .094; that the number of days on which the sun shone was 61; that the number of cloudy days was 53; that the number of days on which it rained was 14; the amount of beets raised upon the patch would indicate that that soil would raise 16.38 tons of Klein Wanzlebener per acre and 13.78 tons of Vilmorin Improved per acre; the analysis of the beets shows that the

Klein Wanzlebener beets there raised would produce 14.60 percentage of sugar, and the Vilmorin Improved 15.64 percentage of sugar. This would indicate that that soil would raise beets that would produce 4,782.96 lbs. of sugar per acre from the Klein Wanzlebener and 4,310.38 lbs. of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 9.

REPORT FOR WEEK ENDING JUNE 5, 1897.

June 2.—From 56° to 72° F.; planted; the rain gauge is ust received and will be put up at once.

General remarks.—The beets were planted on the 2d of June. The land was plowed eight to nine inches deep. then thoroughly worked with a spring tooth harrow and rolled, and all small stones were picked off. The super-phosphate, 500 pounds, was drilled in, going over the piece four times in different directions. The soil is a gravel loam, produced a crop of beans last year and previous to that was pastured two or three years. I think the land was in very good condition when beets were planted. The temperature on that day was, I think, about 70°. They are in rows twenty-four inches apart and just breaking ground now. No rain up to June 7th, since then a fine rain.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 64° F.; clear; beets coming up.

June 7.—6 a. m., 58° F. Noon, 58° F. 6 p. m., 56° F.; fair; rain; cloudy.

June 8.—6 a. m., 56° F. Noon, 60° F. 6 p. m., 60° F.; cloudy.

June 9.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 76° F.; cloudy; rain gauge put up.

June 10.—6 a. m., 56° F. Noon, 80° F. 6 p. m., 78° F.; clear.

June 11.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 76° F.; clear and cloudy; can see the rows nicely.

June 12.—6 a. m., 65° F. Noon, 76° F. 6 p. m., 78° F.; clear.

General remarks.—Labor up to date: June 1st, plowing, one-half day, $1.50; rolling, one-half hour, 15 cents; harrowing, three-horse team, man, one-half day, and spring harrow, $1.50; picking stone, one-half day, $1.50; drilling phosphate, picking stones and rolling, one-half day, $1.50; June 2d, planting the beets, 75 cents; total, $6.85. Planted six and three-quarter pounds of seed.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 65° F. Noon, 76° F. 6 p. m., 76° F.; clear.

June 14.—6 a. m., 58° F. Noon, 76° F.; partly cloudy. 6 p. m., 74° F.; cloudy.

June 15.—6 a. m., 70° F. Noon, 78° F. 6 p. m., 80° F.; clear.

June 16.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 66° F.; clear.

June 17.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 66° F.; part clear and cloudy.

June 18.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 76° F.; clear.

June 19.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 74° F.; rainfall, .02 in.; clear.

General remarks.—The beets are up nicely in rows and have been cultivated with horse. Will hoe them the coming week. They look very fine. They are rather thicker in the row than I think I should plant them again.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 62° F. Noon, 62° F. 6 p. m., 55° F.; clear.
June 21.—6 a. m., 46° F. Noon, 64° F. 6 p. m., 70.; clear.
June 22.—6 a. m., 54° F. Noon, 78° F. 6 p. m., 78° F.; clear.
June 23.—6 a. m., 62° F. Noon, 88° F. 6 p. m., 88° F.; clear.
June 24.—6 a. m., 73° F. Noon, 78° F. 6 p. m., 76° F.; clear and cloudy.
June 25.—6 a. m., 67° F. Noon, 80° F. 6 p. m., 72° F.; clear.
June 26.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 70° F.; clear and cloudy.

General remarks.—The beets are looking well, although a shower of rain would be very beneficial. It has been a long dry spell. They are nearly large enough to commence thinning.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 72° F.; clear.
June 28.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 70° F.; clear.
June 29.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 67° F.; rainfall, .84 in.; cloudy.
June 30.—6 a. m., 70° F. Noon, 73° F. 6 p. m., 78° F.; cloudy.
July 1.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 80° F.; clear.
July 2.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 83° F.; partly cloudy.
July 3.—6 a. m., 78° F. Noon, 89° F. 6 p. m., 88° F.; clear.

General remarks.—Fine rain on the 29th. Beets growing well; nearly through thinning.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 82° F. Noon, 102° F. 6 p. m., 92° F.; clear.
July 5.—6 a. m., 82° F. Noon, 100° F. 6 p. m., 92° F.; rainfall, .2 in.; clear and cloudy.
July 6.—6 a. m., 76° F. Noon, 86° F. 6 p. m., 88° F.; clear.
July 7.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 94° F.; clear.
July 8.—6 a. m., 72° F. Noon, 93° F. 6 p. m., 91° F.; clear.
July 9.—6 a. m., 76° F. Noon, 95° F. 6 p. m., 93° F.; clear.
July 10.—6 a. m., 76° F. Noon, 91° F. 6 p. m., 92° F.; clear and cloudy.

General remarks.—Beets all thinned and growing well.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 76° F. Noon, 93° F. 6 p. m., 72° F.; rainfall, .03 in.; clear and cloudy.
July 12.—6 a. m., 67° F. Noon, 70° F. 6 p. m., 68° F.; clear.
July 13.—6 a. m., 67° F. Noon, 76° F. 6 p. m., 78° F.; clear and cloudy.
July 14.—6 a. m., 67° F. Noon, 80° F. 6 p. m., 72° F.; clear and cloudy.
July 15.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 76° F.; clear and cloudy.
July 16.—6 a. m., 72° F. Noon, 83° F. 6 p. m., 80° F.; clear.
July 17.—6 a. m., 76° F. Noon, 88° F. 6 p. m., 76° F.; clear and cloudy.

General remarks.—Beets are looking fine. almost cover the rows.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 78° F. Noon, 82° F. 6 p. m., 78° F.; frequent showers during the week, about .4 of an in. in all; clear and cloudy.
July 19.—6 a. m., 70° F. Noon, 88° F. 6 p. m., 82° F.; clear.
July 20.—6 a. m., 71° F. Noon, 90° F. 6 p. m., 87° F.; clear.
July 21.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 84° F.; clear and cloudy.
July 22.—6 a. m., 72° F. Noon, 90° F. 6 p. m., 78° F.; clear and cloudy.
July 23.—6 a. m., 72° F. Noon, 82° F. 6 p. m., 74° F.; rain and cloudy.
July 24.—6 a. m., 71° F. Noon, 80° F. 6 p. m., 76° F.; clear and cloudy.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 71° F. Noon, 86° F. 6 p. m., 80° F.; clear and cloudy.

July 26.—6 a. m., 70° F. Noon, 79° F. 6 p. m., 78° F.; cloudy.

July 27.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 70° F.; rainfall, .66 in.; clear and cloudy.

July 28.—6 a. m., 67° F. Noon, 66° F. 6 p. m., 70° F.; cloudy.

July 29.—6 a. m., 68° F. Noon, 68° F. 6 p. m., 70° F.; rainfall, .14 in.

July 30.—6 a. m., 64° F. Noon, 84° F. 6 p. m., 78° F.; clear.

July 31.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 74° F.; clear.

General remarks.—Beets making fine growth.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 66° F. Noon. 78° F. 6 p. m., 76° F.; clear.

August 2.—6 a. m., 68° F. Noon, 82° F. 6 p. m., 78° F.; clear.

August 3.—6 a. m., 70° F. Noon, 83° F. 6 p. m., 83° F.; clear.

August 4.—6 a. m., 73° F. Noon, 80° F. 6 p. m., 73° F.; clear and cloudy.

August 5.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 70° F.; clear.

August 6.—6 a. m., 84° F. Noon, 80° F. 6 p. m., 86° F.; clear.

August 7.—6 a. m., 76° F. Noon, 85° F. 6 p. m., 82° F.; clear and cloudy.

General remarks.—Beets growing well.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 74° F. Noon, 64° F. 6 p. m., 64° F.; clear.

August 9.—6 a. m., 66° F. Noon, 85° F. 6 p. m., 75° F.; clear and cloudy.

August 10.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 68° F.; fine weather.

August 11.—6 a. m., 69° F. Noon, 79° F. 6 p. m., 75° F.; fine weather.

August 12.—6 a. m., 65° F. Noon, 77° F. 6 p. m., 80° F.; fine weather.

August 13.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 75° F.; fine weather.

August 14.—6 a. m., 59° F. Noon, 69° F. 6 p. m., 79° F.; fine weather.

General remarks.—Beets making a fine growth.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 63° F. Noon, 75° F. 6 p. m., 86° F.; clear.

August 16.—6 a. m., 78° F. Noon, 82° F. 6 p. m., 80° F.; clear and cloudy.

August 17.—6 a. m., 66° F. Noon, 77° F. 6 p. m., 74° F.; cloudy.

August 18.—6 a. m., 60° F. Noon, 68° F. 6 p. m., 68° F.; clear.

August 19.—6 a. m., 59° F. Noon, 70° F. 6 p. m., 75° F.; clear.

August 20.—6 a. m., 62° F. Noon, 63° F. 6 p. m., 66° F.; clear and cloudy.

August 21.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 68° F.; clear.

General remarks.—Beets looking well.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 67° F. Noon, 80° F. 6 p. m., 67° F.; clear.

August 23.—6 a. m., 67° F. Noon, 80° F. 6 p. m., 67° F.; clear.

August 24.—6 a. m., 57° F. Noon, 66° F. 6 p. m., 70° F.; cloudy.

August 25.—6 a. m., 63° F. Noon, 67° F. 6 p. m., 73° F.; clear and cloudy.

August 26.—6 a. m., 67° F. Noon, 71° F. 6 p. m., 71° F.; clear and cloudy.

August 27.—6 a. m., 57° F. Noon, 68° F. 6 p. m., 74° F.; clear.

August 28.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 59° F.; clear.

General remarks.—Getting quite dry. Beets need rain.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—Clear and cloudy.

August 30.—6 a. m., 77° F. Noon, 83° F. 6 p. m., 76° F.; clear.

August 31.—6 a. m., 60° F. Noon, 67° F. 6 p. m., 73° F.; clear.

September 1.—6 a. m., 59° F. Noon, 69° F. 6 p. m., 70° F.; cloudy.

September 2.—6 a. m., 61° F. Noon, 76° F. 6 p. m., 79° F.; cloudy and clear.
September 3.—6 a. m., 60° F. Noon, 67° F. 6 p. m., 74° F.; clear.
September 4.—6 a. m., 56° F. Noon, 63° F. 6 p. m., 67° F.; clear and cloudy.
General remarks.—Dry. Beets doing very well.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 59° F. Noon, 65° F. 6 p. m., 74° F.; clear and cloudy.
September 6.—6 a. m., 72° F. Noon, 89° F. 6 p. m., 79° F.; clear.
September 7.—6 a. m., 72° F. Noon. 78° F. 6 p. m., 77° F.; clear.
September 8.—6 a. m., 66° F. Noon, 67° F. 6 p. m., 65° F.; clear.
September 9.—6 a. m., 62° F. Noon, 77° F. 6 p. m., 79° F.; clear and cloudy.
September 10.—6 a. m., 66° F. Noon, 78° F. 6 p. m., 88° F.; clear.
September 11.—6 a. m., 66° F. Noon, 78° F. 6 p. m., 88° F.; clear.
General remarks.—Beets in the middle of the day show the effect of the drought.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—Clear.
September 13.—6 a. m., 79° F. Noon, 82° F. 6 p. m., 77° F.; clear.
September 14.—6 a. m., 74° F. Noon, 77° F. 6 p. m., 79° F.; clear.
September 15.—6 a. m., 59° F. Noon, 64° F. 6 p. m., 66° F.; clear and cloudy.
September 16.—6 a. m., 63° F. Noon, 65° F. 6 p. m., 72° F.; cloudy.
September 17.—6 a. m., 65° F. Noon, 82° F. 6 p. m., 88° F.; clear.
September 18.—6 a. m., 57° F. Noon, 67° F. 6 p. m., 65° F.; clear and cloudy.
General remarks.—Beets doing as well as can be expected.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 49° F. Noon, 65° F. 6 p. m., 66° F.; cloudy.
September 20.—6 a. m., 57° F. Noon, 66° F. 6 p. m., 59° F.; clear and cloudy.
September 21.—6 a. m., 50° F. Noon, 52° F. 6 p. m., 50° F.; cloudy.
September 22.—6 a. m., 44° F. Noon, 56° F. 6 p. m., 62° F.; clear.
September 23.—6 a. m., 47° F. Noon, 64° F. 6 p. m., 64° F.; clear.
September 24.—6 a. m., 50° F. Noon, 63° F. 6 p. m., 60° F.; clear.
September 25.—6 a. m., 57° F. Noon, 64° F. 6 p. m., 70° F.; clear and cloudy.
General remarks.—Beets growing very slowly; extremely dry.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—Cloudy.
September 27.—6 a. m., 59° F. Noon, 65° F. 6 p. m., 62° F.; cloudy.
September 28.—6 a. m., 49° F. Noon, 52° F. 6 p. m., 54° F.; cloudy.
September 29.—6 a. m., 49° F. Noon, 52° F. 6 p. m., 57° F.; cloudy.
September 30.—6 a. m., 47° F. Noon, 67° F. 6 p. m., 67° F.; cloudy.
October 1.—6 a. m., 55° F. Noon, 74° F. 6 p. m., 75° F.; clear and cloudy.
October 2.—6 a. m., 60° F. Noon, 75° F. 6 p. m., 69° F.; clear.
General remarks.—About the same as last report.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 54° F. Noon, 65° F. 6 p. m., 62° F.; clear.
October 4.—6 a. m., 54° F. Noon, 64° F. 6 p. m., 60° F.,; clear.
October 5.—6 a. m., 44° F. Noon, 62° F. 6 p. m., 61° F.; clear.
October 6.—6 a. m., 52° F. Noon, 67° F. 6 p. m., 68° F.; rainfall, .05 in.; clear and cloudy.
October 7.—6 a. m., 56° F. Noon, 63° F. 6 p. m., 57° F.; rainfall, .42 in.; cloudy.
October 8.—6 a. m., 51° F. Noon, 51° F. 6 p. m., 50° F.; clear.
October 9.—6 a. m., 39° F. Noon, 55° F. 6 p. m., 61° F.; clear.
General remarks.—Beets looking better after the rain.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 49° F. Noon, 49° F. 6 p. m., 48° F.; cloudy.

October 11.—6 a. m., 49° F. Noon, 54° R. 6 p. m., 54° F.; rainfall, .62 in.; cloudy.

October 12.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 60° F.; clear and cloudy.

October 13.—6 a. m., 69° F. Noon, 67° F. 6 p. m., 64° F.; clear.

October 14.—6 a. m., 47° F. Noon, 58° F. 6 p. m., 56° F.; clear.

October 15.—6 a. m., 47° F. Noon, 63° F. 6 p. m., 72° F.; rainfall, .25 in.; cloudy.

October 16.—6 a. m., 65° F. Noon, 79° F. 6 p. m., 78° F.; cloudy and clear.

General remarks.—Beets looking well and nearly ready to harvest.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 50° F. Noon, 61° F. 6 p. m., 53° F.; clear.

October 18.—6 a. m., 46° F. Noon, 53° F. 6 p. m., 49° F.; clear and cloudy.

October 19.—6 a. m., 33° F. Noon, 51° F. 6 p. m., 52° F.; rainfall, .82 in.; cloudy.

October 20.—6 a. m., 44° F. Noon, 50° F. 6 p. m., 50° F.; cloudy.

October 21.—6 a. m., 54° F. Noon, 56° F. 6 p. m., 54° F.; clear and cloudy.

October 22.—6 a. m., 56° F. Noon, 56° F. 6 p. m., 55° F.; rainfall, .12 in.; clear and cloudy.

October 23.—6 a. m., 51° F. Noon, 59° F. 6 p. m., 56° F.; clear.

General remarks.—Beets almost ready to harvest.

REPORT FOR WEEK ENDING OCTOBER 30, 1897.

October 24.—6 a. m., 51° F.. Noon, 56° F. 6 p. m., 52° F.; clear and cloudy.

October 25.—6 a. m., 50° F. Noon, 56° F. 6 p. m., 51° F.; rainfall, .1 in.; cloudy.

October 26.—6 a. m., 44° F. Noon, 58° F. 6 p. m., 60° F.; clear and cloudy.

October 27.—6 a. m., 46° F. Noon, 55° F. 6 p. m., 53° F.; clear.

October 28.—6 a. m., 54° F. Noon, 64° F. 6 p. m., 60° F.; clear.

October 29.—6 a. m., 53° F. Noon, 59° F. 6 p. m., 56° F.; rainfall, .06 in.; clear and cloudy.

October 30.—6 a. m., 54° F. Noon, 60° F. 6 p. m., 58° F.; clear.

General remarks.—Sent sample of beets to Geneva Experiment Station October 29th. Harvested the crop November 4th.

GENERAL SUMMARY REPORT.

Varieties planted, Klein Wanzlebener and Vilmorin Improved; planted, June 2d; thinned, July 2d, 3d and 6th; harvested, November 4th. The soil is a sandy loam; been in cultivation thirty years or more to general farm crops; 500 pounds of fertilizer used; last crop was beans. The land was plowed about the 20th of May, eight inches deep; harrowed with spring-tooth harrow; rolled; planted with hand drill. June 15th, stand excellent. Cultivated, June 23d to 29th and July 6th and 14th. The rows twenty-four inches apart. Weather as follows: June, quite dry and cool; July, considerable rain and warm, excellent growing weather; August, quite cool and dry; September, hot and very dry; October, dry and warm, some showers during the month. Beets sent to Geneva Experiment Station, as per directions, October 29th. Vilmorin Improved yielded four tons on the one-fourth acre; Vilmorin Improved washed and topped three and one-fifth tons on the one-fourth acre. Klein Wanzlebener yielded five tons to the one-fourth acre; Klein Wanzlebener washed and topped four and three-fifths tons to one-fourth acre. If there is any other information which you may desire, please notify me.

GEO. W. SIME,
Experimenter.

BROCKPORT, N. Y., *November* 30, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 151 days, making 21 4-7 weeks; that the whole amount of rainfall in the whole time upon the beets was 3.5 inches; that the average rainfall per month was .69; that the average rainfall per week was .16; and that the average rainfall per day was .023; that the number of days on which the sun shone was 79; that the number of cloudy days was 60; that the number of days on which it rained was 12; the kind of soil on which this patch of beets was raised was sand loam; the amount of beets raised upon the patch would indicate that that soil would raise 20 tons of Klein Wanzlebener per acre and 16 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 15.76 percentage of sugar and the Vilmorin Improved 14.40 percentage of sugar. This would indicate that that soil would raise beets that would produce 6304 pounds of sugar per acre from the Klein Wanzlebener and 4608 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 10.

REPORT FOR WEEK ENDING JUNE 12, 1897.

General remarks.—Beet seed sowed June 8th, and it rained most of the time. Did not have the rain gauge, hence cannot give rainfall. Seed not yet up. The average temperature was from 60° to 70°. Hereafter will report weekly the daily temperature, rainfall and expense. Plowing land, $2; filling land, $2; sowing seed and phosphate, $3; total, $7.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 50° F.; cool breeze. Noon, 70° F. 6 p. m., 66° F.; partly cloudy.
June 14.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 70° F.; partly cloudy.
June 15.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 67° F.; clear.
June 16.—6 a. m., 48° F. Noon, 78° F. 6 p. m., 72° F.; clear.
June 17.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 62° F.; clear.
June 18.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 67° F.; clear; seed partly up.
June 19.—6 a. m., 54° F. Noon, 68° F. 6 p. m., 64° F.; rainfall, .3 in.; cloudy.

General remarks.—Seeds are coming up very uneven; have replanted some portions. Expense, eight hours' labor for man, at fifteen cents, $1.20.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 58° F. Noon, 60° F. 6 p. m., 62° F.; cloudy.
June 21.—6 a. m., 48° F. Noon, 62° F. 6 p. m., 58° F.; cloudy.
June 22.—6 a. m., 46° F. Noon, 56° F. 6 p. m., 52° F.; clear.
June 23.—6 a. m., 50° F. Noon, 67° F. 6 p. m., 60° F.; clear.
June 24.—6 a. m., 74° F. Noon, 88° F. 6 p. m., 78° F.; rainfall, .1 in.; partly cloudy.
June 25.—6 a. m., 72° F. Noon, 80° F. 6 p. m., 62° F.; partly cloudy.
June 26.—6 a. m., 58° F. Noon, 64° F. 6 p. m., 58° F.; clear.

General remarks.—Seeds are nearly all up, and will commence cultivating and weeding this week. Ground is hard and baked, on account of excessive rains when seed were planted.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 58° F. Noon, 67° F. 6 p. m., 53° F.; clear; beets from one to three inches high.

June 28.—6 a. m., 64° F. Noon, 72° F. 6 p. m., 63° F.; clear; very uneven.

June 29.—6 a. m., 63° F. Noon, 70° F. 6 p. m., 60° F.; rainfall, 1.1 in.; cloudy; beets very uneven.

June 30.—6 a. m., 58° F. Noon, 67° F. 6 p. m., 62° F.; cloudy.

July 1.—6 a. m., 58° F. Noon, 74° F. 6 p. m., 76° F.; clear.

July 2.—6 a. m., 68° F. Noon, 86° F. 6 p. m., 67° F.; clear.

July 3.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 84° F.; clear.

General remarks.—June 29th, one-half day cultivating with beans, $1.50; June 30th, one-half day, man weeding, 75 cents; total for the week, $2.25.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 78° F. Noon, 88° F. 6 p. m., 80° F.; clear.

July 5.—6 a. m., 82° F. Noon, 92° F. 6 p. m., 86° F.; clear.

July 6.—6 a. m., 80° F. Noon, 88° F. 6 p. m., 94° F.; cloudy.

July 7.—6 a. m., 76° F. Noon, 86° F. 6 p. m., 84° F.; clear.

July 8.—6 a. m., 76° F. Noon, 88° F. 6 p. m., 86° F.; clear.

July 9.—6 a. m., 84° F. Noon, 96° F. 6 p. m., 88° F.; clear.

July 10.—6 a. m., 80° F. Noon, 94° F. 6 p. m., 86° F.; clear.

General remarks.—July 7th, three and one-half hours, man and team, cultivating, at thirty cents an hour, $1.05.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 80° F. Noon, 88° F. 6 p. m., 84° F.; clear.

July 12.—6 a. m., 74° F. Noon, 76° F. 6 p. m., 68° F.; rainfall, 1 in.; cloudy.

July 13.—6 a. m., 68° F. Noon, 74° F. 6 p. m., 72° F.; rainfall, .1 in.; cloudy.

July 14.—6 a. m., 67° F. Noon, 68° F. 6 p. m., 72° F.; rainfall, .65 in.; cloudy.

July 15.—6 a. m., 68° F. Noon, 70° F. 6 p. m., 70° F.; partly cloudy.

July 16.—6 a. m., 72° F. Noon, 80° F. 6 p. m., 70° F.; partly cloudy.

July 17.—6 a. m., 70° F. Noon, 68° F. 6 p. m., 76° F.; cloudy.

General remarks.—July 13th, two days' labor, weeding, at $1.50, $3; 14th, five days' labor, weeding, at $1.50, $7.50; 17th, four hours' cultivating, at 30 cents, $1.20; total, $11.70. Beets are uneven, but growing nicely.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 72° F.; cloudy.

July 19.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 72° F.; cloudy.

July 20.—6 a. m., 68° F. Noon, 70° F. 6 p. m., 72° F.; rainfall, .6 in.; cloudy.

July 21.—6 a. m., 72° F. Noon, 76° F. 6 p. m., 72° F.; partly cloudy.

July 22.—6 a. m., 70° F. Noon, 74° F. 6 p. m., 73° F.; rainfall, .3 in.; cloudy.

July 23.—6 a. m., 68° F. Noon, 69° F. 6 p. m., 75° F.; rainfall, .5 in.; cloudy.

July 24.—6 a. m., 56° F. Noon, 60° F. 6 p. m., 58° F.; rainfall, .5 in.; cloudy.

General remarks.—July 22d, one and one-half days' labor, transplanting beets, at $1.50, $2.25. The ground is very wet.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 64° F. Noon, 68° F. 6 p. m., 66° F.; cloudy.

July 26.—6 a. m., 60° F. Noon, 62° F. 6 p. m., 56° F.; rainfall, .75 in.; cloudy.

July 27.—6 a. m., 52° F. Noon, 54° F. 6 p. m., 50° F.; rainfall, .5 in.; cloudy.

July 28.—6 a. m., 48° F. Noon, 52° F. 6 p. m., 50° F.; cloudy.

July 29.—6 a. m., 46° F. Noon, 60° F. 6 p. m., 54° F.; rainfall, 1.1 in.; cloudy.

July 30.—6 a. m., 50° F. Noon, 64° F. 6 p. m., 60° F.; cloudy.

July 31.—6 a. m., 54° F. Noon, 66° F. 6 p. m., 60° F.; cloudy.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 62° F. Noon, 68° F. 6 p .m., 65° F.; rainfall, .5 in.; cloudy.

August 2.—6 a. m., 55° F. Noon, 66° F. 6 p. m., 64° F.; clear.

August 3.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 74° F.; clear.

August 4.—6 a. m., 80° F. Noon, 86° F. 6 p. m., 84° F.; clear.

August 5.—6 a. m., 70° F. Noon, 74° F. 6 p. m., 70° F.; partly cloudy.

August 6.—6 a. m., 76° F. Noon, 84° F. 6 p. m., 68° F.; partly cloudy.

August 7.—6 a. m., 72° F. Noon, 80° F. 6 p. m., 78° F.; partly cloudy.

General remarks.—August 4th, one-half day cultivating, at $3 per day, $1.50. Beets are now doing quite nicely.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 80° F. Noon, 88° F. 6 p. m., 82° F.; partly cloudy.

August 9.—6 a. m., 81° F. Noon, 86° F. 6 p. m., 78° F.; partly cloudy.

August 10.—6 a. m., 78° F. Noon, 84° F. 6 p. m., 82° F.; rainfall, .2 in.; cloudy.

August 11.—6 a. m., 78° F. Noon, 76° F. 6 p. m., 74° F.; cloudy.

August 12.—6 a. m., 72° F. Noon, 78° F. 6 p. m., 70° F.; rainfall, .4 in.; cloudy.

August 13.—6 a. m., 68° F. Noon, 60° F. 6 p. m., 65° F.; partly cloudy.

August 14.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 76° F.; clear.

General remarks.—August 9th, one-half day cultivating, at $3 per day, $1.50; one day weeding, $1.50.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 76° F. Noon, 80° F. 6 p. m., 78° F.; rainfall, .2 in.; cloudy.

August 16.—6 a. m., 68° F. Noon, 72° F. 6 p. m., 70° F.; partly cloudy.

August 17.—6 a. m., 65° F. Noon, 68° F. 6 p. m., 64° F.; rainfall, .4 in.; cloudy.

August 18.—6 a. m., 58° F. Noon, 60° F. 6 p. m., 56° F.; cloudy.

August 19.—6 a. m., 60° F. Noon, 66° F. 6 p. m., 64° F.; rainfall, .5 in.; cloudy.

August 20.—6 a. m., 54° F. Noon, 58° F. 6 p. m., 56° F.; clear.

August 21.—6 a. m., 56° F. Noon, 68° F. 6 p. m., 68° F.

General remarks.—August 21st, one-half day cultivating, $1.50.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 64° F. Noon, 68° F. 6 p. m., 64° F.; clear.

August 23.—6 a. m., 56° F. Noon, 62° F. 6 p. m., 60° F.; rainfall, .2 in.; cloudy.

August 24.—6 a. m., 54° F. Noon, 60° F. 6 p. m., 58° F.; rainfall, .4 in.; cloudy.

August 25.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 60° F.; cloudy.

August 26.—6 a. m., 56° F. Noon, 60° F. 6 p. m., 58° F.; partly cloudy.

August 27.—6 a. m., 48° F. Noon, 60° F. 6 p. m., 66° F.; partly cloudy.

August 28.—6 a. m., 72° F. Noon, 82° F. 6 p. m., 74° F.; partly cloudy.

General remarks.—August 27th, one-half day cultivating, at $3 per day, $1.50.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 60° F.; cloudy.

August 30.—6 a. m., 56° F. Noon, 68° F. 6 p. m., 60° F.; partly cloudy.

August 31.—6 a. m., 54° F. Noon, 56° F. 6 p. m., 58° F.; rainfall, .4 in.; partly cloudy.

September 1.—6 a. m., 52° F. Noon, 54° F. 6 p. m., 56° F.; cloudy.

September 2.—6 a. m., 50° F. Noon, 58° F. 6 p. m., 54° F.; partly cloudy.

September 3.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 54° F.; clear.

September 4.—6 a. m., 56° F. Noon, 64° F. 6 p. m., 62° F.; clear.

General remarks.—September 4th, one-half day cultivating, man and team, at $3 per day, $1.50.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 64° F.; clear.

September 6.—6 a. m., 66° F. Noon, 78° F. 6 p. m., 64° F.; cloudy.

September 7.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 72° F.; rainfall, .2 in.; cloudy.

September 8.—6 a. m., 72° F. Noon, 78° F. 6 p. m., 70° F.; partly cloudy.
September 9.—6 a. m., 74° F. Noon, 80° F. 6 p. m., 78° F.; partly cloudy.
September 10.—6 a. m., 80° F. Noon, 84° F. 6 p. m., 80° F.; partly cloudy.
September 11.—6 a. m., 80° F. Noon, 88° F. 6 p. m., 84° F.; cloudy.
General remarks.—September 9th, one-half day cultivating, at $3 per day, $1.50.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 60° F. Noon, 66° F. 6 p. m., 50° F.; partly cloudy.
September 13.—6 a. m., 56° F. Noon, 60° F. 6 p. m., 58° F.; cloudy.
September 14.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 54° F.; rainfall, .2 in.; cloudy.
September 15.—6 a. m., 40° F. Noon, 54° F. 6 p. m., 50° F.; rainfall, .2 in.; cloudy.
September 16.—6 a. m., 48° F. Noon, 58° F. 6 p. m., 60° F.; cloudy.
September 17.—6 a. m., 62° F. Noon, 68° F. 6 p. m., 64° F.; clear.
September 18.—6 a. m., 38° F. Noon, 48° F. 6 p. m., 50° F.; clear.
General remarks.—September 18th, one-half day cultivating, at $3 per day, $1.50.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 58° F.; cloudy.
September 20.—6 a. m., 62° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, .7 in.; cloudy.
September 21.—6 a. m., 64° F. Noon, 68° F. 6 p. m., 62° F.; cloudy.
September 22.—6 a. m., 56° F. Noon, 58° F. 6 p. m., 54° F.; cloudy.
September 23.—6 a. m., 60° F. Noon, 66° F. 6 p. m., 62° F.; cloudy.
September 24.—6 a. m., 64° F. Noon, 70° F. 6 p. m., 66° F.; rainfall, 1 in.; cloudy.
September 25.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 58° F.; partly cloudy.
General remarks.—September 25th, one-half day harvesting, at $3 per day, $1.50.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 54° F. Noon, 60° F. 6 p. m., 56° F.; rainfall, .1 in.; cloudy.
September 27.—6 a. m., 48° F. Noon, 54° F. 6 p. m., 50° F.; partly cloudy.
September 28.—6 a. m., 40° F. Noon, 46° F. 6 p. m., 44° F.; clear.
September 29.—6 a. m., 50° F. Noon, 54° F. 6 p. m., 52° F.; clear.
September 30.—6 a. m., 56° F. Noon, 64° F. 6 p. m., 62° F.; partly cloudy.
October 1.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 54° F.; partly cloudy.
October 2.—6 a. m., 40° F. Noon, 48° F. 6 p. m., 46° F.; partly cloudy.

General remarks.—The leaves on the beets are green and not commenced to turn yellow, and I should judge that it would be two weeks before the beets are ripe. I do not see any new growth of leaves on them yet. I account for this as the seed was put in late. Will you please inform me what part of the beets you want shipped and at what time you want them shipped.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 40° F. Noon, 48° F. 6 p. m., 46° F.; partly cloudy.
October 4.—6 a. m., 44° F. Noon, 52° F. 6 p. m., 48° F.; partly cloudy; dry; cold.
October 5.—6 a. m., 48° F. Noon, 54° F. 6 p. m., 50° F., partly cloudy.
October 6.—6 a. m., 34° F. Noon, 46° F. 6 p. m., 40° F.; partly cloudy.
October 7.—6 a. m., 38° F. Noon, 46° F. 6 p. m., 32° F.; partly cloudy; dry, cold night, with white frost.
October 8.—6 a. m., 26° F. Noon, 48° F. 6 p. m., 44° F.; partly cloudy.
October 9.—6 a. m., 40° F. Noon, 44° F. 6 p. m., 38° F.; partly cloudy.

General remarks.—The leaves are now turning yellow and I will pull them the last of this week if I do not hear from you to the contrary.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 40° F. Noon, 48° F. 6 p. m., 46° F.; partly cloudy.
October 11.—6 a. m., 42° F. Noon, 54° F. 6 p. m., 50° F.; partly cloudy.
October 12.—6 a. m., 46° F. Noon, 60° F. 6 p. m., 54° F.; rainfall, .5 in.; cloudy.

October 13.—6 a. m., 50° F. Noon, 62° F. 6 p. m., 58° F.; partly cloudy.
October 14.—6 a. m., 60° F. Noon, 68° F. 6 p. m., 66° F.; partly cloudy.
October 15.—6 a. m., 72° F. Noon, 88° F. 6 p. m., 80° F.; partly cloudy.
October 16.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 70° F.; partly cloudy.

General remarks.—October 18th, three days labor harvesting beets, at $1.50 per day, $4.50; one-half day team plowing out beets, at $3 per day, $1.50; October 19th, three days labor harvesting beets, at $1.50 per day, $4.50; October 20th, two canvas bags to ship beets in, 50 cents; express charges on beets to Geneva, prepaid, $1; total weight of one-quarter acre Klein Wanzlebener tops, 6,650 pounds; total weight of one-quarter acre Klein Wanzlebener trimmed, 5,000 pounds; total weight of one quarter Vilmorin Improved tops, 6,384 pounds; to'al weight of one-quarter acre Vilmorin Improved trimmed, 4,800 pounds.

C. H. PHILO,
Experimenter.

WASHINGTON MILLS, N. Y., *October* 21, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 119 days, making 17 weeks; that the whole amount of rainfall in the whole time upon the beets was 12.1; that the average rainfall per month was 3; that the average rainfall per week was .7; and that the average rainfall per day was .1; that the number of days on which the sun shone was 33; that the number of cloudy days was 61; that the number of days on which it rained 25; the amount of beets raised upon the patch would indicate that that soil would raise 13.30 tons of Klein Wanzlebener per acre and 12.76 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 14.24 percentage of sugar and the Vilmorin Improved 14.60 percentage of sugar. This would indicate that that soil would raise beets that would produce 3,787.84 lbs. of sugar per acre from the Klein Wanzlebener and 3,728.26 lbs. of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 11.

REPORT FOR WEEK ENDING JUNE 1, 1897.

General remarks.—Soil, sand loam; plowed deep last fall; plowed again before planting; ground well harrowed and planted with drill on May 24th in rows twenty inches apart; seed has come well.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 21.—6 a. m., 52° F. Noon, 72° F. 6 p. m., 60° F.; partly cloudy; beets about 3 inches high; heavy rains have caused a crust; the ground is slightly cracked.

June 22.—6 a. m., 54° F. Noon, 78° F. 6 p. m., 74° F.; partly cloudy.

June 23.—6 a. m., 64° F. Noon, 90° F. 6 p. m., 82° F.; partly cloudy.

June 24.—6 a. m., 76° F. Noon, 94° F. 6 p. m., 84° F.; partly cloudy.

June 25.—6 a. m., 74° F. Noon, 96° F. 6 p. m., 72° F.; partly cloudy; beets 4 inches high.

June 26.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 60° F.; partly cloudy.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 62° F. Noon, 74° F. 6 p. m., 64° F.; partly cloudy; had light rains two days; the soil is in good condition.

June 28.—6 a. m., 52° F. Noon, 84° F. 6 p. m., 72° F.; clear.

June 29.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 66° F.; rainfall, .2 in.; cloudy.

June 30.—6 a. m., 74° F. Noon, 88° F. 6 p. m., 72° F.; rainfall, .9 in.; cloudy.

July 1.—6 a. m., 68° F. Noon, 92° F. 6 p. m., 74° F.; partly cloudy.

July 2.—6 a. m., 64° F. Noon, 84° F. 6 p. m., 76° F.; clear.

July 3.—6 a. m., 64° F. Noon, 98° F. 6 p. m., 86° F.; clear.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 72° F. Noon, 100° F. 6 p. m., 88° F.; clear.

July 5.—6 a. m., 76° F. Noon, 106° F. 6 p. m., 90° F.; clear.

July 6.—6 a. m., 80° F. Noon, 112° F. 6 p. m., 72° F.; rainfall, 1.4 in.; cloudy.

July 7.—6 a. m., 68° F. Noon, 100° F. 6 p. m., 80° F.; clear.

July 8.—6 a. m., 94° F. Noon, 100° F. 6 p. m., 84° F.; clear.

July 9.—6 a. m., 76° F. Noon, 100° F. 6 p. m., 82° F.; partly cloudy.

July 10.—6 a. m., 72° F. Noon, 106° F. 6 p. m., 80° F.; rainfall, .3 in.; partly cloudy; 3 inches high.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 76° F. Noon, 96° F. 6 p. m., 82° F.; cloudy.

July 12.—6 a. m., 72° F. Noon, 84° F. 6 p. m., 72° F.; cloudy.

July 13.—6 a. m., 68° F. Noon, 78° F. 6 p. m., 70° F.; cloudy.

July 14.—6 a. m., 68° F. Noon, 94° F. 6 p. m., 78° F.; cloudy.

July 15.—6 a. m., 62° F. Noon, 88° F.; rainfall, 1.3 in. 6 p. m., 78° F.; rainfall, 1.1 in.; partly cloudy.

July 16.—6 a. m., 62° F. Noon, 94° F. 6 p. m., 80° F.; clear.

July 17.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 68° F.; rainfall, .25 in.; cloudy.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 72° F.; clear.

July 19.—6 a. m., 70° F. Noon, 98° F. 6 p. m., 78° F.; cloudy.

July 20.—6 a. m., 72° F. Noon, 100° F. 6 p. m., 76° F.; rainfall, .2 in.

July 21.—6 a. m., 70° F. Noon, 96° F. 6 p. m., 76° F.; rainfall, .3 in.

July 22.—6 a. m., 72° F. Noon, 82° F. 6 p. m., 78° F.; clear.

July 23.—6 a. m., 76° F. Noon, 92° F. 6 p. m., 70° F.; cloudy.

July 24.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 76° F.; rainfall, .25 in.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 74° F. Noon, 80° F. 6 p. m., 70° F.; cloudy.

July 26.—6 a. m., 66° F. Noon, 76° F. 6 p. m., 68° F.; rainfall, .3 in.; cloudy.

July 27.—6 a. m., 60° F. Noon, 64° F. 6 p. m., 62° F.; rainfall, .25 in.; cloudy.

July 28.—6 a. m., 56° F. Noon, 60° F. 6 p. m., 60° F.; rainfall, .2 in.; cloudy.

July 29.—6 a. m., 62° F. Noon, 76° F. 6 p. m., 68° F.; rainfall, .5 in.; cloudy.

July 30.—6 a. m., 68° F. Noon, 88° F. 6 p. m., 74° F.; rainfall, .2 in.; cloudy.

July 31.—6 a. m., 70° F. Noon, 88° F. 6 p. m., 72° F.; cloudy.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 60° F. Noon, 82° F. 6 p. m., 68° F.; clear.
August 2.—6 a. m., 60° F. Noon, 94° F. 6 p. m., 72° F.; clear.
August 3.—6 a. m., 72° F. Noon, 102° F. 6 p. m., 80° F.; clear.
August 4.—6 a. m., 74° F. Noon, 108° F. 6 p. m., 80° F.; rainfall, .2 in.; cloudy.
August 5.—6 a. m., 60° F. Noon, 84° F. 6 p. m., 66° F.; partly cloudy.
August 6.—6 a. m., 60° F. Noon, 108° F. 6 p. m., 64° F.; partly cloudy.
August 7.—6 a. m., 56° F. Noon, 110° F. 6 p. m., 75° F.; clear.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 56° F. Noon, 92° F. 6 p. m., 78° F.; partly cloudy.
August 9.—6 a. m., 60° F. Noon, 110° F. 6 p. m., 78° F.; cloudy forenoon, clear afternoon.
August 10.—6 a. m., 65° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .7 in.; partly cloudy.
August 11.—6 a. m., 62° F. Noon, 80° F. 6 p. m., 60° F.; cloudy.
August 12.—6 a. m., 58° F. Noon, 98° F. 6 p. m., 72° F.; clear.
August 13.—6 a. m., 62° F. Noon, 102° F. 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 76° F. Noon, 98° F. 6 p. m., 76° F.; rainfall, .5 in.; partly cloudy.
August 16.—6 a. m., 76° F. Noon, 98° F. 6 p. m., 78° F.; partly cloudy.
August 17.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 60° F.; clear.
August 18.—6 a. m., 48° F. Noon, 70° F. 6 p. m., 60° F.; partly cloudy.
August 19.—6 a. m., 50° F. Noon, 78° F. 6 p. m., 62° F.; rainfall, .2 in.; partly cloudy.
August 20.—6 a. m., 58° F. Noon, 100° F. 6 p. m., 60° F.; clear.
August 21.—6 a. m., 50° F. Noon, 100° F. 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 68° F. Noon, 90° F. 6 p. m., 68° F.; partly cloudy.
August 23.—6 a. m., 52° F. Noon, 78° F. 6 p. m., 64° F.; partly cloudy.
August 24.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 64° F.; rainfall, 1.2 in.
August 25.—6 a. m., 50° F. Noon, 96° F. 6 p. m., 60° F.; partly cloudy.
August 26.—6 a. m., 52° F. Noon, 92° F. 6 p. m., 60° F.; partly cloudy.
August 27.—6 a. m., 46° F. Noon, 97° F. 6 p. m., 70° F.; clear.
August 28.—6 a. m., 60° F. Noon, 110° F. 6 p. m., 70° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 60° F. Noon, 110° F. 6 p. m., 70° F.; clear.
August 30.—6 a. m., 60° F. Noon, 90° F. 6 p. m., 50° F.; partly cloudy.
August 31.—6 a. m., 48° F. Noon, 90° F. 6 p. m., 52° F.; clear.
September 1.—6 a. m., 48° F. Noon, 82° F. 6 p. m., 58° F.; clear.
September 2.—6 a. m., 52° F. Noon, 82° F. 6 p. m., 54° F.; partly cloudy.
September 3.—6 a. m., 48° F. Noon, 92° F. 6 p. m., 52° F.; clear.
September 4.—6 a. m., 32° F. Noon, 90° F. 6 p. m., 54° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 10, 1897.

September 5.—6 a. m., 58° F. Noon, 110° F. 6 p. m., 68° F.; clear.
September 6.—6 a. m., 52° F. Noon, 102° F. 6 p. m., 70° F.; clear.
September 7.—6 a. m., 82° F.; rainfall, 1 in.
September 8.—Partly cloudy.
September 9.—Clear.
September 10.—Clear.
September 11.—Partly cloudy.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 54° F. Noon, 90° F. 6 p. m., 60° F.; partly cloudy.

September 27.—6 a. m., 42° F. Noon, 72° F. 6 p. m., 40° F.; clear.

September 28.—6 a. m., 36° F. Noon, 66° F. 6 p. m., 48° F.; clear.

September 29.—6 a. m., 40° F. Noon, 96° F. 6 p. m., 56° F.; clear.

September 30.—6 a. m., 40° F. Noon, 106° F. 6 p. m., 68° F.; clear.

October 1.—6 a. m., 50° F. Noon, 98° F. 6 p. m., 52° F.; clear.

October 2.—Clear.

General remarks.—I think the beets should be harvested between the 15th and 20th of October. The beets show little signs of ripeness; they are quite green yet.

Planted May 24. Commenced reports June 21: Cloudy, 6 days, rain, .11 in.; rain, 2 days, clear, 3 days, cloudy, 2 days, rain, 1.07 in.; rain, 2 days, clear, 4 days, cloudy, 1 day, rain, 2.29 in.; rain, 2 days, clear, 1 day, cloudy, 4 days, rain, .29 in.; rain, 3 days, clear, 2 days, cloudy, 2 days, rain, 1.1 in.; rain, 5 days, cloudy, 2 days, rain, 1.7 in.; rain, 1 day, clear, 4 days, cloudy, 2 days, rain, 2.65 in.; rain, 1 day, clear, 3 days, cloudy, 3 days, rain, .75 in.; rain, 2 days, clear, 3 days, cloudy, 2 days, rain, 2.45 in.; rain, 1 day, clear, 2 days, cloudy, 4 days, rain, .20 in.; clear, 5 days, cloudy, 2 days, rain, .70 in.; rain, 1 day, clear, 4 days, cloudy, 2 days, rain, .70 in.; clear, 6 days, cloudy, 1 day, rain, 1.20 in. Last report, October 2. 28 days not reported; 20 days rain; 37 days clear; 33 days cloudy; total, 118 days.

A. J. HAINER,
Experimenter.

COBLESKILL, N. Y., *October* 3, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 118 days, making 16 weeks; the amount of beets raised upon the patch would indicate that that soil would raise 16.56 tons of Klein Wanzlebener per acre; the analysis of the beet shows that the Klein Wanzlebener beets there raised would produce 12.60 percentage of sugar. This would indicate that that soil would raise beets that would produce 4,176.29 pounds of sugar from the Klein Wanzlebener, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 12.

REPORT FOR WEEK ENDING JUNE 5, 1897.

June 1.—Noon, 40° F.; rain; cloudy.

June 2.—Noon, 58° F.; clear.

June 3.—Noon, 68° F.; rain; partly cloudy.

June 4.—Noon, 66° F. 6 p. m., 60° F.; rain; partly cloudy.

June 5.—6 a. m., 46° F. Noon, 59° F. 6 p. m., 58° F.; partly cloudy.

General remarks.—The beets were planted May 29, 1897. No. 1, Vilmorin Improved, was planted on south half of the lot, and No. 2, Klein Wanzlebener, was planted on north half of the lot. They were planted on clover sod which was plowed about December 1, 1896, and which was planted with corn May 20, 1897. It was cultivated four times before planted with corn. In order to destroy the corn, the land was harrowed twice with a spring-tooth harrow and once with a Scotch harrow. The soil is clay flats mixed with some sand. No manure or fertilizer had been put on the land since it had been plowed. A seed drill was used in planting the seed. They were planted the day after the soil was harrowed, as above described, in rows twenty inches apart. The fertilizer had not arrived at the time the seed was planted. It was late and the weather had been wet for some time and I could not wait for the fertilizer. I had no other land available for the experiment. The wet weather, the short time at my disposal and the want of manure and fertilizer, did not permit such a preparation of the soil as would secure the best results.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—6 a. m., 45° F. Noon, 65° F. 6 p. m., 60° F.; partly cloudy.

June 7.—6 a. m., 50° F. Noon, 57° F. 6 p. m., 47° F.; cloudy.

June 8.—6 a. m., 44° F. Noon, 48° F. 6 p. m., 50° F.; rainfall, 1.81 in.; cloudy.

June 9.—6 a. m., 40° F. Noon, 47° F. 6 p. m., 44° F.; rainfall, 1.12 in.; cloudy.

June 10.—6 a. m., 46° F. Noon, 51° F. 6 p. m., 51° F.; rainfall, .16 in.; cloudy.

June 11.—6 a. m., 53° F. Noon, 70° F. 6 p. m., 65° F.; rainfall, .83 in.; partly cloudy.

June 12.—6 a. m., 52° F. Noon, 64° F. 6 p. m., 59° F.; partly cloudy.

General remarks.—The beets began to come up Monday, June 7. June 12th the beets have about an inch growth or a little less. The ground has been too wet to cultivate.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 53° F. Noon, 65° F. 6 p. m., 56° F.; partly cloudy.

June 14.—6 a. m., 52° F. Noon, 64° F. 6 p. m., 60° F.; partly cloudy.

June 15.—6 a. m., 47° F. Noon, 66° F. 6 p. m., 64° F.; partly cloudy.

June 16.—6 a. m., 47° F. Noon, 69° F. 6 p. m., 61° F.; clear.

June 17.—6 a. m., 47° F. Noon, 67° F. 6 p. m., 66° F.; partly cloudy.

June 18.—6 a. m., 54° F. Noon, 74° F. 6 p. m., 65° F.; partly cloudy.

June 19.—6 a. m., 47° F. Noon, 76° F. 6 p. m., 68° F.; rainfall, from 7 a. m. Saturday and 7 a. m. Sunday, .06 in.; partly cloudy.

General remarks.—Phosphate was put on the beets June 17th and cultivated on June 18th. Some of the beets are up an inch high and some are very small.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 60° F. Noon, 61° F. 6 p. m., 53° F.; cloudy.

June 21.—6 a. m., 45° F. Noon, 59° F. 6 p. m., 59° F.; clear.

June 22.—6 a. m., 47° F. Noon, 68° F. 6 p. m., 65° F.; clear.

June 23.—6 a. m., 57° F. Noon, 78° F. 6 p. m., 75° F.; clear.

June 24.—6 a. m., 66, F. Noon. 80° F. 6 p. m., 72° F.; partly cloudy.

June 25.—6 a. m., 67° F. Noon, 79° F. 6 p. m., 72° F.; partly cloudy.

June 26.—6 a. m., 55° F. Noon, 63° F. 6 p. m., 54° F.; partly cloudy.

General remarks.—Beets are not growing very well, the ground is too dry; no rain to speak of in nearly three weeks.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 52° F. Noon, 59° F. 6 p. m., 58° F.; partly cloudy.

June 28.—6 a. m., 54° F. Noon, 72° F. 6 p. m., 66° F.; clear.

June 29.—6 a. m., 47° F. Noon, 66° F. 6 p. m., 59° F.; cloudy.

June 30.—6 a. m., 65° F. Noon, 76° F. 6 p. m., 67° F.; rainfall, between 7 a. m. Tuesday and 7 a. m. Wednesday, 1.06 in.; partly cloudy.

July 1.—6 a. m., 61° F. Noon, 79° F. 6 p. m., 74° F.; partly cloudy.

July 2.—6 a. m., 60° F. Noon, 77° F. 6 p. m., 73° F.; partly cloudy.

July 3.—6 a. m., 56° F. Noon, 79° F. 6 p. m., 78° F.; clear.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 52° F. Noon, 102° F. 6 p. m., 82° F.; clear.

July 5.—6 a. m., 78° F. Noon, 90° F. 6 p. m., 82° F.; clear.

July 6.—6 a. m., 77° F. Noon, 91° F. 6 p. m., 76° F.; rainfall, between 7 a. m. Tuesday and 7 a. m. Wednesday, .27 in.; partly cloudy.

July 7.—6 a. m., 69° F. Noon, 90° F. 6 p. m., 82° F.; partly cloudy.

July 8.—6 a. m., 71° F. Noon, 86° F. 6 p. m., 84° F.; partly cloudy.

July 9.—6 a. m., 74° F. Noon, 90° F. 6 p. m., 80° F.; partly clear.

July 10.—6 a. m., 70° F. Noon, 90° F. 6 p. m., 82° F.; partly cloudy.

General remarks.—Finished scraping the beets July 10th for the first time.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 67° F. Noon, 86° F. 6 p. m., 80° F.; rainfall, between Sunday 7 a. m. and Monday 7 a. m., .26 in.; cloudy.

July 12.—6 a. m., 69° F. Noon, 78° F. 6 p. m., 68° F.; rainfall, between Monday 7 a. m. and Tuesday 7 a. m., 1.18 in.; cloudy.

July 13.—6 a. m., 63° F. Noon, 68° F. 6 p. m., 65° F.; rainfall, between Tuesday 7 a. m. and Wednesday 7 a. m., 1.35 in.; cloudy.

July 14.—6 a. m., 62° F. Noon, 77° F. 6 p. m., 70° F.; rainfall, between Wednesday 7 a. m. and Thursday 7 a. m., .11 in.; partly cloudy.

July 15.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 78° F.; partly cloudy.

July 16.—6 a. m., 58° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy.

July 17.—6 a. m., 63° F. Noon, 71° F. 6 p. m., 68° F.; rainfall, between Saturday 7 a. m. and Sunday 7 a. m., .30 in.; cloudy.

General remarks.—The man who has the care of the beets finished thinning them out Saturday and he thinks the beets look good.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 70° F.; cloudy.

July 19.—6 a. m., 64° F. Noon, 76° F. 6 p. m., 75° F.; partly cloudy.

July 20.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 76° F.; partly cloudy.

July 21.—6 a. m., 60° F. Noon, 78° F. 6 p. m., 73° F.; rainfall, between 7 a. m. Wednesday and 7 a. m. Thursday, .17 in.; partly cloudy.

July 22.—6 a. m., 66° F. Noon, 76° F. 6 p. m., 76° F.; partly cloudy.

July 23.—6 a. m., 64° F. Noon, 79° F. 6 p. m., 68° F.; rainfall, between 7 a. m. Friday and 7 a. m. Saturday, .9 in.; partly cloudy.

July 24.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 70° F.; cloudy.

General remarks.—Beets were cultivated Wednesday, July 21st.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 64° F.; rainfall, between 7 a. m. Sunday and 7 a. m. Monday, .87 in.; cloudy.

July 26.—6 a. m., 60° F. Noon, 67° F. 6 p. m., 63° F.; cloudy.

July 27.—6 a. m., 54° F. Noon, 57° F. 6 p. m., 64° F.; rainfall, between 7 a. m. Tuesday and 7 a. m. Wednesday, .27 in.; cloudy.

July 28.—6 a. m., 53° F. Noon, 56° F. 6 p. m., 56° F.; rainfall, between 7 a. m. Wednesday and 7 a. m. Thursday, 1 in.; cloudy.

July 29.—6 a. m., 56° F. Noon, 62° F. 6 p. m., 62° F.; rainfall, between 7 a. m. Thursday and 7 a. m. Friday, .13 in.; cloudy.

July 30.—6 a. m., 61° F. Noon, 71° F. 6 p. m., 70° F.; partly cloudy.

July 31.—6 a. m., 64° F. Noon, 75° F. 6 p. m., 66° F.; partly cloudy.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 70° F.; partly cloudy.

August 2.—6 a. m., 64° F. Noon, 78° F. 6 p. m., 72° F.; clear.

August 3.—6 a. m., 65° F. Noon, 83° F. 6 p. m., 78° F.; clear.

August 4.—6 a. m., 68° F. Noon, 83° F. 6 p. m., 73° F.; rainfall, between 7 a. m. Wednesday and 7 a. m. Thursday, .17 in.; clear.

August 5.—6 a. m., 59° F. Noon, 68° F. 6 p. m., 67° F.; partly cloudy.

August 6.—6 a. m., 54° F. Noon, 78° F. 6 p. m., 70° F.; clear.

August 7.—6 a. m., 59° F. Noon, 79° F. 6 p. m., 72° F.; clear.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 67° F. Noon, 78° F. 6 p. m., 72° F.; partly cloudy.

August 9.—6 a. m., 69° F. Noon, 80° F. 6 p. m., 72° F.; partly cloudy.

August 10.—6 a. m., 59° F. Noon, 73° F. 6 p. m., 68° F.; rainfall, between 7 a. m. Tuesday and 7 a. m. Wednesday, .8 in.; partly cloudy.

August 11.—6 a. m., 62° F. Noon, 76° F. 6 p. m., 72° F.; partly cloudy.

August 12.—6 a. m., 64° F. Noon, 72° F. 6 p. m., 69° F.; partly cloudy.

August 13.—6 a. m., 60° F. Noon, 72° F. 6 p. m., 68° F.; clear.

August 14.—6 a. m., 57° F. Noon, 82° F. 6 p. m., 74° F.; clear.

General remarks.—Finished hoeing the beets Saturday the 14th.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 62° F. Noon, 88° F. 6 p. m., 69° F.; partly cloudy.

August 16.—6 a. m., 62° F. Noon, 82° F. 6 p. m., 71° F.; rainfall, between 7 a. m. and 7 a. m. Tuesday, .28 in.; partly cloudy.

August 17.—6 a. m., 60° F. Noon, 67° F. 6 p. m., 62° F.; partly cloudy.

August 18.—6 p. m., 60° F. Noon, 68° F. 6 p. m., 64° F.; partly cloudy.

August 19.—6 a. m., 56° F. Noon, 80° F. 6 p. m., 62° F.; rainfall, between 7 a. m. Thursday and 7 a. m. Friday, .06 in.; partly cloudy.

August 20.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 61° F.; partly cloudy.

August 21.—6 a. m., 50° F. Noon, 74° F. 6 p. m., 68° F.; partly cloudy.

General remarks.—Beets were cultivated Wednesday, August 18th.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 68° F.; partly cloudy.

August 23.—6 a. m., 48° F. Noon, 72° F. 6 p. m., 62° F.; rainfall, between 7 a. m. Monday and 7'a .m. Tuesday, .92 in.; partly cloudy.

August 24.—6 a. m., 56° F. Noon, 62° F. 6 p. m., 56° F.; rainfall, between 7 a. m. Tuesday and 7 a. m., Wednesday, .3 in.; cloudy.

August 25.—6 a. m., 50° F. Noon, 67° F. 6 p. m., 63° F.; partly cloudy.

August 26.—6 a. m., 49° F. Noon, 70° F. 6 p. m., 64° F.; partly cloudy.

August 27.—6 a. m., 48° F. Noon, 80° F. 6 p. m., 70° F.; partly cloudy.

August 28.—6 a. m., 58° F. Noon, 72° F. 6 p. m., 64° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 54° F. Noon, 80° F. 6 p. m., 72° F.; clear.

August 30.—6 a. m., 64° F. Noon, 74° F. 6 p. m., 64° F.; partly cloudy.

August 31.—6 a. m., 46° F. Noon, 72° F. 6 p. m., 65° F.; clear.

September 1.—6 a. m., 52° F. Noon, 79° F. 6 p. m., 68° F.; rainfall, between 7 a. m. Wednesday and 7 a. m. Thursday, .78 in.; partly cloudy.

September 2.—6 a. m., 54° F. Noon, 70° F. 6 p. m., 68° F.; cloudy.

September 3.—6 a. m., 46° F. Noon, 68° F. 6 p. m., 62° F.; partly cloudy.

September 4.—6 a. m., 42° F. Noon, 68° F. 6 p. m., 66° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 54° F. Noon, 72° F. 6 p. m., 66° F.; clear.

September 6.—6 a. m., 56° F. Noon, 85° F. 6 p. m., 76° F.; clear.

September 7.—6 a. m., 60° F. Noon, 66° F. 6 p. m., 64° F.; partly cloudy.

September 8.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 72° F.; cloudy.

September 9.—6 a. m., 60° F. Noon, 88° F. 6 p. m., 72° F.; clear.

September 10.—6 a. m., 64° F. Noon, 90° F. 6 p. m., 80° F.; clear.

September 11.—6 a. m., 63° F. Noon, 81° F. 6 p. m., 61° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 45° F. Noon, 74° F. 6 p. m., 65° F.; partly cloudy.
September 13.—6 a. m., 62° F. Noon, 74° F. 6 p. m., 72° F.; partly cloudy.
September 14.—6 a. m., 54° F. Noon, 70° F. 6 p. m., 61° F.; partly cloudy.
September 15.—6 a. m., 44° F. Noon, 66° F. 6 p. m., 60° F.; clear.
September 16.—6 a. m., 44° F. Noon, 78° F. 6 p. m., 70° F.; clear.
September 17.—6 a. m., 68° F. Noon, 72° F. 6 p. m., 57° F.; partly cloudy.
September 18.—6 a. m., 44° F. Noon, 64° F. 6 p. m., 56° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 54° F. Noon, 74° F. 6 p. m., 58° F.; rainfall, between 7 a. m. Sunday and 7 a. m. Monday, .55 in.; partly cloudy.
September 20.—6 a. m., 52° F. Noon, 54° F. 6 p. m., 47° F.; cloudy.
September 21.—6 a. m., 42° F. Noon, 58° F. 6 p. m., 48° F.; clear.
September 22.—6 a. m., 32° F. Noon, 61° F. 6 p. m., 52° F.; clear.
September 23.—6 a. m., 48° F. Noon, 52° F. 6 p. m., 56° F.; rainfall, between 7 a. m. Thursday and 7 a. m. Friday, .76 in.; cloudy.
September 24.—6 a. m., 52° F. Noon, 58° F. 6 p. m., 58° F.; cloudy.
September 25.—6 a. m., 44° F. Noon, 74° F. 6 p. m., 62° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 53° F. Noon, 77° F. 6 p. m., 59° F.; rainfall, between 7 a. m. Sunday and 7 a. m. Monday, .09 in.; partly cloudy.
September 27.—6 a. m., 48° F. Noon, 56° F. 6 p. m., 46° F.; partly cloudy.
September 28.—6 a. m., 36° F. Noon, 54° F. 6 p. m., 48° F.; clear.
September 29.—6 a. m., 40° F. Noon, 67° F. 6 p. m., 57° F.; clear.
September 30.—6 a. m., 42° F. Noon, 80° F. 6 p. m., 64° F.; clear.
October 1.—6 a. m., 42° F. Noon, 82° F. 6 p. m., 64° F.; partly cloudy.
October 2.—6 a. m., 49° F. Noon, 60° F. 6 p. m., 46° F.; partly cloudy.

General remarks.—The beets are still green and growing but there is no starting or growth of new leaves. The tops are green and show no change of color yet. They ought to be pulled about October 20.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 34° F. Noon, 62° F. 6 p. m., 46° F.; partly cloudy.
October 4.—6 a. m., 30° F. Noon, 74° F. 6 p. m., 55° F.; clear.
October 5.—6 a. m., 30° F. Noon, 76° F. 6 p. m., 55° F.; clear.
October 6.—6 a. m., 47° F. Noon, 63° F. 6 p. m., 55° F.; cloudy.
October 7.—6 a. m., 48° F. Noon, 52° F. 6 p. m., 50° F.; rainfall, between 7 a. m. Thursday and 7 a. m. Friday, .18 in.; cloudy.
October 8.—6 a. m., 40° F. Noon, 62° F. 6 p. m., 50° F.; clear.
October 9.—6 a. m., 52° F. Noon, 60° F. 6 p. m., 42° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 40° F. Noon, 53° F. 6 p. m., 46° F.; clear.
October 11.—6 a. m., 40° F. Noon, 70° F. 6 p. m., 62° F.; partly cloudy.
October 12.—6 a. m., 62° F. Noon, 66° F. 6 p. m., 60° F.; rainfall, between 7 a. m. Tuesday and 7 a. m. Wednesday, .76 in.; cloudy.
October 13.—6 a. m., 42° F. Noon, 68° F. 6 p. m., 52° F.; clear.
October 14.—6 a. m., 36° F. Noon, 70° F. 6 p. m., 62° F.; clear.
October 15.—6 a. m., 50° F. Noon, 90° F. 6 p. m., 74° F.; partly cloudy.
October 16.—6 a. m., 70° F. Noon, 92° F. 6 p. m., 77° F.; clear.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 49° F. Noon, 54° F. 6 p. m., 44° F.; clear.
October 18.—6 a. m., 30° F. Noon, 62° F. 6 p. m., 50° F.; clear.
October 19.—6 a. m., 36° F. Noon, 62° F. 6 p. m., 48° F.; partly cloudy.

October 20.—6 a. m., 38° F. Noon, 58° F. 6 p. m., 50° F.; cloudy.
October 21.—6 a. m., 48° F. Noon, 53° F. 6 p. m., 47° F.; partly cloudy.
October 22.—6 a. m., 46° F. Noon, 52° F. 6 p. m., 44° F.; cloudy.
October 23.—6 a. m., 36° F. Noon, 62° F. 6 p. m., 48° F.; clear.

General remarks.—Will finish gathering the beets Monday if it does not rain.

HORACE G. TENNANT,
Experimenter.

SCHOHARIE, N. Y., *October* 24, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 146 days, making 20 6-7 weeks; that the whole amount of rainfall in the whole time upon the beets was 17.66; that the average rainfall per month was 3.6; that the average rainfall per week was .84; and that the average rainfall per day was .12; that the number of days on which the sun shone was 43; that the number of cloudy days was 69; that the number of days on which it rained was 34; the kind of soil in which this patch of beets was raised was clay flats mixed with sand; the amount of beets raised upon the patch would indicate that that soil would raise 22.49 tons of Klein Wanzlebener per acre, and 16.57 tons of Vilmorin Improved per acre. The analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 13.50 percentage of sugar, and the Vilmorin Improved, 14.12 percentage of sugar. This would indicate that that soil would raise beets that would produce 6,072.30 lbs. of sugar per acre from the Klein Wanzlebener, and 5,541.25 lbs. of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 13.

REPORT FOR WEEK ENDING JUNE 5, 1897.

June 1.—Cloudy and cool all day.
June 2.—Cloudy, some warmer.
June 3.—Rainfall, .75 in.; rained all day and most all night.
June 4.—Pleasant and warmer.
June 5.—Sun shone all day and quite warm.

General remarks.—May 28 and 29, fitted one-half acre of land for sugar beets. June 1, raked the ground ready for sowing; June 2, sowed the beet seed. The land is a sand loam with clay bottom and is slightly inclined to the north. The water gauge has not arrived yet and, therefore, cannot give exact amount of rain that fell; I think about three-quarters of an inch. Beets planted twenty inches apart; ground plowed and subsoiled and thoroughly fitted; do not know temperature.

REPORT FOR WEEK ENDING JUNE 12, 1897.

June 6.—Partly cloudy.

June 7.—Clear and warm; beets just coming up.

June 8.—Rainfall, .3 in.; warm and cloudy.

June 9.—6 a. m., 63° F. Noon, 62° F. 6 p. m., 54° F.; rainfall, .3 in.; cloudy.

June 10.—6 a. m., 49° F. Noon, 54° F. 6 p. m., 54° F.; rainfall, .1 in.; cloudy; beets looking fine.

June 11.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 68° F.; rainfall, .01 in.; clear and warm; beets growing fast.

June 12.—6 a. m., 77° F. Noon, 78° F.; partly cloudy. 6 p. m., 78° F.; clear and warm; beets about three-eighths inches high.

General remarks.—June 12th, beets are looking fine. 7 p. m., June 12th, just beginning to rain.

REPORT FOR WEEK ENDING JUNE 19, 1897.

June 13.—6 a. m., 53° F. Noon, 67° F.; rainfall, .45 in. 6 p. m., 64° F.; cloudy.

June 14.—6 a. m., 54° F. Noon, 70° F.; rainfall, .04 in. 6 p. m., 65° F.; cloudy.

June 15.—Clear.

June 16.—6 a. m., 50° F. Noon, 74° F. 6 p. m., 70° F.; clear.

June 17.—6 a. m., 50° F. Noon, 75° F. 6 p. m., 63° F.; cloudy.

June 18.—6 a. m., 60° F. Noon, 73° F. 6 p. m., 67° F.; clear.

June 19.—6 a. m., 58° F. Noon, 78° F. 6 p. m., 68° F.; clear.

General remarks.—By mistake, Tuesday's temperature was not kept, but was quite warm, not varying far from Wednesday's temperature. The beets are growing rapidly and are looking nice.

REPORT FOR WEEK ENDING JUNE 26, 1897.

June 20.—6 a. m., 54° F. Noon, 63° F. 6 p. m., 56° F.; cloudy.

June 21.—6 a. m., 48° F. Noon, 54° F. 6 p. m., 58° F.; cloudy.

June 22.—6 a. m., 51° F. Noon, 69° F. 6 p. m., 66° F.; cloudy.

June 23.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 74° F.; clear.

June 24.—6 a. m., 68° F. Noon, 85° F. 6 p. m., 75° F.; cloudy.

June 25.—6 a. m., 65° F. Noon, 78° F. 6 p. m., 68° F.; cloudy.

June 26.—6 a. m., 52° F. Noon, 63° F. 6 p. m., 56° F.; cloudy.

REPORT FOR WEEK ENDING JULY 3, 1897.

June 27.—6 a. m., 47° F. Noon, 78° F. 6 p. m., 64° F.; clear.

June 28.—6 a. m., 56° F. Noon, 72° F. 6 p. m., 68° F.; clear.

June 29.—6 a. m., 56° F. Noon, 78° F. 6 p. m., 60° F.; partly cloudy.

June 30.—6 a. m., 58° F. Noon, 62° F. 6 p. m., 76° F.; rainfall, .26 in.; partly cloudy.

July 1.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 70° F.; clear.

July 2.—6 a. m., 68° F. Noon, 80° F. 6 p. m., 74° F.; clear.

July 3.—6 a. m., 67° F. Noon, 89° F. 6 p. m., 78° F.; clear.

General remarks.—The beets are growing fast; they are not all of a height, but average about three inches or possibly four.

REPORT FOR WEEK ENDING JULY 10, 1897.

July 4.—6 a. m., 75° F. Noon, 96° F. 6 p. m., 89° F.; clear.

July 5.—6 a. m., 78° F. Noon, 98° F. 6 p. m., 90° F.; clear.

July 6.—7 a. m., 76° F. Noon, 92° F. 6 p. m., 80° F.; clear.

July 7.—6 a. m., 70° F. Noon, 94° F. 6 p. m., 84° F.; clear.

July 8.—6 a. m., 78° F. Noon, 96° F. 6 p. m., 88° F.; clear.

July 9.—6 a. m., 80° F. Noon, 94° F. 6 p. m., 89° F.; clear.

July 10.—6 a. m., 66° F. Noon, 88° F. 6 p. m., 80° F.; partly cloudy.

General remarks.—The beets vary in size; some are quite large, while others are backward in growth. The hot weather helped them at first; afterward wilted them considerable.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—6 a. m., 73° F. Noon, 94° F. 6 p. m., 70° F.; cloudy.

July 12.—6 a. m., 67° F. Noon, 64° F. 6 p. m., 62° F.; rainfall, 1.1 in.; cloudy.

July 13.—6 a. m., 58° F. Noon, 64° F. 6 p. m., 65° F.; cloudy.

July 14.—6 a. m., 62° F. Noon, 72° F. 6 p. m., 70° F.; rainfall, .33 in.; cloudy.

July 15.—6 a. m., 61° F. Noon, 78° F. 6 p. m., 72° F.; partly cloudy.

July 16.—6 a. m., 64° F. Noon, 84° F. 6 p. m., 78° F.; clear.

July 17.—6 a. m., 68° F. Noon, 85° F. 6 p. m., 70° F.; cloudy.

General remarks.—Rain gave beets quite a lift; they are growing rapidly.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—6 a .m., 70° F. Noon, 86° F. 6 p. m., 78° F.; partly cloudy.

July 19.—6 a. m., 78° F. Noon, 85° F. 6 p. m., 80° F.; partly cloudy.

July 20.—6 a. m., 70° F. Noon, 82° F. 6 p. m., 80° F.; partly cloudy.

July 21.—6 a. m., 72° F. Noon, 91° F. 6 p. m., 78° F.; rainfall, .14 in.; partly cloudy.

July 22.—6 a. m., 72° F. Noon, 82° F. 6 p. m., 75° F.; rainfall, .1 in.; cloudy.

July 23.—6 a. m., 68° F. Noon, 81° F. 6 p. m., 73° F.; partly cloudy.

July 24.—6 a. m., 62° F. Noon, 78° F.; rainfall, .4 in. 6 p. m., 70° F.; cloudy.

General remarks.—The last rain produced a marked change on the beets. The largest beets are about twenty inches in height.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 70° F. Noon, 79° F. 6 p. m., 92° F.; cloudy.

July 26.—6 a. m., 70° F. Noon, 80° F. 6 p. m., 72° F.; cloudy.

July 27.—6 a. m., 51° F. Noon, 81° F. 6 p. m., 76° F.; partly cloudy.

July 28.—6 a. m., 58° F. Noon, 70° F. 6 p. m., 58° F.; rainfall, 1.38 in.; cloudy.

July 29.—6 a. m., 57° F. Noon, 68 F. 6 p. m., 63° F.; rainfall, 1.32 in.; cloudy.

July 30.—6 a. m., 59° F. Noon, 71° F. 6 p. m., 70° F.; rainfall, .2 in.; cloudy.

July 31.—6 a. m., 46° F. Noon, 64° F. 6 p. m., 63° F.; rainfall, .68 in.; cloudy.

General remarks.—The last rain produced a great change in the beets.

REPORT FOR WEEK ENDING AUGUST 7, 1897.

August 1.—6 a. m., 70° F. Noon, 77° F. 6 p. m., 84° F.; clear.

August 2.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 64° F.; clear.

August 3.—6 a. m., 67° F. Noon, 78° F. 6 p. m., 66° F.; clear.

August 4.—6 a. m., 64° F. Noon, 71° F. 6 p. m., 60° F.; partly cloudy.

August 5.—6 a. m., 60° F. Noon, 70° F. 6 p. m., 60° F.; clear.

August 6.—6 a. m., 58° F. Noon, 75° F. 6 p. m., 70° F.; partly cloudy.

August 7.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 74° F.; clear.

General remarks.—Beets are growing rapidly; tops are about two feet high.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 70° F. Noon, 80° F. 6 p. m., 70° F.; clear.

August 9.—6 a. m., 62° F. Noon, 79° F. 6 p. m., 72° F.; clear.

August 10.—6 a. m., 62° F. Noon, 64° F. 6 p. m., 64° F.; rainfall, .98 in.; cloudy.

August 11.—6 a. m., 60° F. Noon, 74° F. 6 p. m., 70° F.; rainfall, .65 in.; cloudy.

August 12.—6 a. m., 62° F. Noon, 74° F. 6 p .m., 60° F.; cloudy.

August 13.—6 a. m., 52° F. Noon, 69° F. 6 p. m., 62° F.; cloudy.

August 14.—6 a. m., 63° F. Noon, 76° F. 6 p. m., 70° F.; cloudy.

General remarks.—Beets are looking fine.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 62° F. Noon, 74° F. 6 p. m., 71° F.; partly cloudy.

August 16.—6 a. m., 69° F. Noon, 75° F. 6 p. m., 72° F.; cloudy.

August 17.—6 a. m., 59° F. Noon, 62° F. 6 p. m., 62° F.; cloudy.

August 18.—6 a. m., 54° F. Noon, 64° F. 6 p. m., 64° F.; partly cloudy.

August 19.—6 a. m., 54° F. Noon, 62° F. 6 p. m., 62° F.; rainfall, .33 in.; partly cloudy.

August 20.—6 a. m., 50° F. Noon, 62° F. 6 p. m., 60° F.; partly cloudy.

August 21.—6 a. m., 57° F. Noon, 62° F. 6 p. m., 51° F.; partly cloudy.

General remarks.—Beets are so large that it is impossible to use cultivator; tops have covered the ground for some time.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 57° F. Noon, 62° F. 6 p. m., 51° F.; partly cloudy.

August 23.—6 a. m., 44° F. Noon, 60° F. 6 p. m., 56° F.; partly cloudy.

August 24.—6 a. m., 52° F. Noon, 58° F. 6 p. m., 61° F.; partly cloudy.

August 25.—6 a. m., 60° F. Noon, 71° F.; rainfall, .33 in. 6 p. m., 68° F.; partly cloudy.

August 26.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 62° F.; partly cloudy.

August 27.—6 a. m., 56° F. Noon, 76° F. 6 p. m. 60° F.; clear.

August 28.—6 a. m., 58° F. Noon, 74° F. 6 p. m., 62° F.; partly cloudy.

General remarks.—Beets are the same in appearance as a week ago.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 72° F.; clear.

August 30.—6 a. m., 62° F. Noon, 78° F. 6 p. m., 68° F.; partly cloudy.

August 31.—6 a. m., 55° F. Noon, 70° F. 6 p. m., 63° F.; partly cloudy.

September 1.—6 a. m., 56° F. Noon, 76° F. 6 p. m., 68° F.; partly cloudy.

September 2.—6 a. m., 56° F. Noon, 64° F. 6 p. m., 65° F.; partly cloudy.

September 3.—6 a. m., 56° F. Noon, 60° F. 6 p. m., 57° F.; clear.

September 4.—6 a. m., 50° F. Noon, 70° F. 6 p. m., 64° F.; clear.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 74° F.; partly cloudy.

September 6.—6 a. m., 71° F. Noon, 82° F. 6 p. m., 74° F.; partly cloudy.

September 7.—6 a. m., 53° F. Noon, 61° F. 6 p. m., 59° F.; partly cloudy.

September 8.—6 a. m., 64° F. Noon, 81° F. 6 p. m., 72° F.; partly cloudy.

September 9.—6 a. m., 67° F. Noon, 76° F. 6 p. m., 72° F.; partly cloudy.

September 10.—6 a. m., 74° F. Noon, 90° F. 6 p. m., 75° F.; rainfall, .27 in.; partly cloudy.

September 11.—6 a. m., 70° F. Noon, 72° F. 6 p. m., 54° F.; partly cloudy.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 45° F. Noon, 64° F. 6 p. m., 85° F.; partly cloudy.

September 13.—6 a. m., 70° F. Noon, 71° F. 6 p. m., 68° F.; rainfall, .45 in.; cloudy.

September 14.—6 a. m., 54° F. Noon, 61° F. 6 p. m., 58° F.; clear.

September 15.—6 a. m., 44° F. Noon, 64° F. 6 p. m., 61° F.; clear.

September 16.—6 a. m., 64° F. Noon, 81° F. 6 p. m., 85° F.; partly cloudy.

September 17.—6 a. m., 51° F. Noon, 58° F. 6 p. m., 52° F.; partly cloudy.

September 18.—6 a. m., 44° F. Noon, 58° F. 6 p. m., 58° F.; partly cloudy.

General remarks.—Had one frost, but apparently did not affect beets.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 44° F. Noon, 46° F. 6 p. m., 40° F.; partly cloudy.

September 20.—6 a. m., 37° F. Noon, 56° F. 6 p. m., 51° F.; partly cloudy.

September 21.—6 a. m., 51° F. Noon, 58° F. 6 p. m., 50° F.; partly cloudy.

September 22.—6 a. m., 54° F. Noon, 61° F. 6 p. m., 56° F.; partly cloudy.

September 23.—6 a. m., 44° F. Noon, 56° F. 6 p. m., 60° F.; partly cloudy.

September 24.—6 a. m., 48° F. Noon, 58° F. 6 p. m., 52° F.; partly cloudy.

September 25.—6 a. m., 43° F. Noon, 48° F. 6 p. m., 41° F.; partly cloudy.

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26. 6 a. m., 48° F. Noon, 58° F. 6 p. m., 52° F.; partly cloudy.
September 27.—6 a. m., 43° F. Noon, 48° F. 6 p. m., 40° F.; partly cloudy.
September 28.—6 a. m., 31° F. Noon, 58° F. 6 p. m., 50° F.; partly cloudy.
September 29.—6 a. m., 49° F. Noon, 61° F. 6 p. m., 54° F.; partly cloudy.
September 30.—6 a. m., 48° F. Noon, 76° F. 6 p. m., 68° F.; partly cloudy.
October 1.—6 a. m., 53° F. Noon, 66° F. 6 p. m., 55° F.; partly cloudy.
October 2.—6 a. m., 40° F. Noon, 58° F. 6 p. m., 46° F.; partly cloudy.

General remarks.—Bottom leaves on beets are turning yellow and some new leaves are starting.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 54° F. Noon, 64° F. 6 p. m., 60° F.
October 4.—6 a. m., 53° F. Noon, 66° F. 6 p. m., 60° F.
October 5.—6 a. m., 52° F. Noon, 70° F. 6 p. m., 54° F.
October 6.—6 a. m., 53° F. Noon, 60° F. 6 p. m., 57° F.
October 7.—6 a. m., 50° F. Noon, 58° F. 6 p. m., 40° F.
October 8.—6 a. m., 32° F. Noon, 64° F. 6 p. m., 52° F.
October 9.—6 a. m., 29° F. Noon, 48° F. 6 p. m., 40° F.

General remarks.—Had one frost and one hard freeze this week. The freeze curled quite a number of the beet leaves and the edges are turning brown.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 25° F. Noon, 64° F. 6 p. m., 50° F.
October 11.—6 a. m., 58° F. Noon, 66° F. 6 p. m., 70° F.
October 12.—6 a. m., 55° F. Noon, 64° F. 6 p. m., 60° F.
October 13.—6 a. m., 48° F. Noon, 62° F. 6 p. m., 56° F.
October 14.—6 a. m., 50° F. Noon, 72° F. 6 p. m., 70° F.
October 15.—6 a. m., 70° F. Noon, 80° F. 6 p. m., 34° F.
October 16.—6 a. m., 71° F. Noon, 72° F. 6 p. m., 74° F.

General remarks.—The sky was clear nearly all the week and we have had no rainfall for some time. There was quite a hard frost Friday evening.

REPORT FOR WEEK ENDING OCTOBER 23, 1897.

October 17.—6 a. m., 58° F. Noon, 44° F. 6 p. m., 48° F.; clear.
October 18.—6 a. m., 32° F. Noon, 56° F. 6 p. m., 50° F.; clear.
October 19.—6 a. m., 41° F. Noon, 48° F. 6 p. m., 45° F.;. clear.

General remarks.—Gathered beets Monday and Tuesday; ground was so hard that we had to plow along side beets in order to pull them; owing to the lack of rain for the past month the beets have not grown at all to be noticed; that, with the washout in the spring and the lateness of sowing, prevented there being a fair test; there would have been double the number of tons with a good season; the beets were pulled in the manner stated above and the tops cut off in the field and then taken to the house and weighed; there were three and three-fourths tons of the Klein Wanzlebener beets and three and three-eighths of the Vilmorin Improved. We then took one hundred pounds of the Vilmorin Improved, cut off the necks and washed them and then weighed them, the shrinkage being eighteen pounds. We then repeated the process with the others, and the shrinkage was twenty pounds. Fifty pounds of each were then selected, according to directions, and shipped to Geneva.

ARTHUR FLANDERS,
Experimenter.

HOPKINTON, N. Y., *October* 25, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 145 days; making 20 5-7 weeks; that the whole amount of rainfall in the whole time upon the beets was 10.97; that the average rainfall per month was 1.8; that the average rainfall per week was .42; and that the average rainfall per day was .06; that the number of days on which the sun shone was 50; that the number of cloudy days was 68; that the number of days on which it rained was 23; the kind of soil on which this patch of beets was raised was sandy loam with clay bottom; the amount of beets raised upon the patch would indicate that that soil would raise 15 tons of Klein Wanzlebener per acre and 13.50 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 14.68 percentage of sugar and the Vilmorin Improved 16.60 percentage of sugar. This would indicate that that soil would raise beets that would produce 4,404 pounds of sugar per acre from the Klein Wanzlebener and 4,482 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

PATCH No. 14.

REPORT FOR WEEK ENDING JUNE 12, 1897.

Sunday, June 6.—.06 in. of water for week ending June 19, 1897. The Klein Wanzlebener are coming up nicely, but the Vilmorin Improved is not all up yet, and are much smaller. It is pretty dry.

Total amount of rainfall, week ending June 12: June 8, .40 in.; June 9, .05 in., and June 10, .07 in. Beets were drilled June 4, 1897.

Your letter of instructions at hand. Beets are not coming up very even; pretty spotted. Our fertilizer came, and we put it in before we put in the beets. Amount of rainfall: June 23, .17 in.; June 24, .13 in. For cultivating beets, June 22, three hours, with horse, 75 cents; man to lead horse, 38 cents; total, $1.13.

REPORT FOR WEEK ENDING JULY 17, 1897.

July 11.—Noon, 90° F.; rainfall, 2.81 in.; clear; cloudy; heavy rain; beets are from three to four inches in height; rain was beneficial after transplanting; do not see any ill effects from rain.

July 12.—Noon, 80° F.; rainfall, .44 in.; rain; cloudy; clear; some of the beets are as large as a lead pencil, and from three to four inches long.

July 13.—Noon, 78° F.; clear.

July 14.—Noon, 70° F.; rainfall, .65 in.; rain; partly cloudy.

July 15.—Noon, 80° F.; cloudy; partly cloudy; clear.

July 16.—Noon, 88° F.; partly cloudy.

July 17.—Noon, 85° F.; partly cloudy.

General remarks.—On account of the wet weather, I think many of the beets that were transplanted will live. The Vilmorin Improved seems to be growing more rapidly than the Klein Wanzlebener, which had the best start. The cut worms have been injuring them somewhat.

REPORT FOR WEEK ENDING JULY 24, 1897.

July 18.—66° F. Noon, 76° F.; cloudy. 6 p. m., 70° F.; rain.

July 19.—6 a. m., 66° F.; cloudy. Noon, 76° F.; partly cloudy. 6 p. m., 74° F.; rainfall, .35 in.; cloudy.

July 20.—6 a. m., 66° F. Noon, 72° F. 6 p. m., 72° F.; partly cloudy.

July 21.—6 a. m., 75° F. Noon, 78° F.; clear. 6 p. m., 73° F.; cloudy.

July 22.—6 a. m., 66° F. Noon, 84° F.; clear. 6 p. m., 76° F.; rainfall, .11 in.; cloudy.

July 23.—6 a. m., 68° F. Noon, 70° F.; rainfall, 1.01 in.; cloudy and rain. 6 p. m., 66° F.; cloudy.

July 24.—6 a. m., 63° F. Noon, 66° F.; rainfall, .2 in.; cloudy. 6 p. m., 69° F.; partly cloudy.

REPORT FOR WEEK ENDING JULY 31, 1897.

July 25.—6 a. m., 67° F.; cloudy. Noon, 75° F.; partly cloudy. 6 p. m., 76° F.; clear.

July 26.—6 a. m., 68° F.; partly cloudy. Noon, 76° F. 6 p. m., 70° F.; cloudy.

July 27.—6 a. m., 61° F.; rainfall, .38 in.; cloudy and rain. Noon, 68° F.; clear. 6 p. m., 65° F.; cloudy.

July 28.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 60° F.; rainfall, .18 in.; cloudy.

July 29.—6 a. m., 58° F. Noon, 62° F.; rainfall, .48 in.; cloudy and rain. 6 p. m., 60° F.; cloudy.

July 30.—6 a. m., 64° F.; cloudy. Noon, 75° F. 6 p. m., 72° F.; clear.

July 31.—6 a. m., 62° F. Noon, 70° F.; clear. 6 p. m., 66° F.; cloudy.

REPORT FOR WEEK ENDING AUGUST 14, 1897.

August 8.—6 a. m., 68° F. Noon, 76° F. 6 p. m., 68° F.; clear; we have had sufficient rain to keep beets growing nicely; weather for past week has been a little cooler.

August 9.—6 a. m., 76° F. Noon, 80° F.; clear. 6 p. m., 75° F.; cloudy.

August 10.—6 a. m., 64° F.; rainfall, .48 in.; rain. Noon, 76° F.; cloudy. 6 p. m., 68° F.; partly cloudy.

August 11.—6 a. m., 63° F. Noon, 66° F.; cloudy. 6 p. m., 66° F.; rainfall, .12 in.; rain.

August 12.—6 a. m., 58° F.; clear. Noon, 66° F.; partly cloudy. 6 p. m., 62° F.; rainfall, .2 in.; rain.

August 13.—6 a. m., 58° F.; rainfall, .21 in.; part cloudy. Noon, 66° F. 6 p. m., 62° F.; clear.

August 14.—6 a. m., 56° F. Noon, 80° F. 6 p. m., 74° F.; clear.

General remarks.—My transplanted beets do not seem to grow as fast as I would like. The most of them are alive. I have taken a good deal of pains with them.

REPORT FOR WEEK ENDING AUGUST 21, 1897.

August 15.—6 a. m., 68° F.; cloudy. Noon, 80° F.; clear. 6 p. m., 62° F.; rainfall, .06 in.; part cloudy.

August 16.—6 a. m., 62° F. Noon, 73° F.; part cloudy. 6 p. m., 60° F.; rainfall, .78 in.; rain.

August 17.—6 a. m., 55° F. Noon, 68° F.; cloudy. 6 p. m., 60° F.; rainfall, .08 in.; clear.

August 18.—6 a. m., 50° F.; rainfall, .03 in.; cloudy. Noon, 72° F.; part cloudy. 6 p. m., 71° F.; clear.

August 19.—6 a. m., 58° F. Noon, 65° F.; clear. 6 p. m., 60° F.; rainfall, .42 in.; rain.

August 20.—6 a. m., 53° F. Noon, 55° F. 6 p. m., 58° F.; clear.

August 21.—6 a. m., 45° F. Noon, 66° F. 6 p. m., 59° F.; clear.

REPORT FOR WEEK ENDING AUGUST 28, 1897.

August 22.—6 a. m., 55° F. Noon, 70° F. 6 p. m., 68° F.; clear.

August 23.—6 a. m., 58° F. Noon, 66° F. 6 p. m., 62° F.; clear.

August 24.—6 a. m., 60° F. Noon, 70° F. 6 p .m., 68° F.; clear.

August 25.—6 a. m., 56° F.; cloudy; rainfall, .1 in. Noon, 60° F. 6 p. m., 64° F.; clear.

August 26.—6 a. m., 58° F. Noon, 65° F. 6 p. m., 60° F.; clear.

August 27.—6 a. m., 60° F. Noon, 68° F. 6 p. m., 65° F.; clear.

August 28.—6 a. m., 58° F. Noon, 68° F. 6 p. m., 62° F.; clear.

General remarks.—The transplanted beets are growing nicely, and some of the largest are cracking open.

REPORT FOR WEEK ENDING SEPTEMBER 4, 1897.

August 29.—6 a. m., 57° F.; clear. Noon, 68° F. 6 p. m., 65° F.; cloudy.

August 30.—6 a. m., 66° F. Noon, 65° F. 6 p. m., 62° F.; clear.

August 31.—6 a. m., 58° F. Noon, 66° F. 6 p. m., 64° F.; clear.

September 1.—6 a. m., 66° F. Noon, 70° F. 6 p. m., 68° F.; cloudy.

September 2.—6 a. m., 48° F.; rainfall, .03 in.; rain. Noon, 65° F.; cloudy. 6 p. m., 62° F.; clear.

September 3.—6 a. m., 47° F. Noon, 68° F. 6 p. m., 65° F.; clear.

September 4.—6 a. m., 45° F. Noon, 72° F. 6 p. m., 71° F.; clear.

General remarks.—The beets are looking fine. There has not been any frost as yet.

REPORT FOR WEEK ENDING SEPTEMBER 11, 1897.

September 5.—6 a. m., 66° F. Noon, 80° F. 6 p. m., 75° F.; clear.

September 6.—6 a. m., 60° F. Noon, 80° F. 6 p. m., 72° F.; clear.

September 7.—6 a. m., 68° F. Noon, 86° F.; clear. 6 p. m., 78° F.; cloudy.

September 8.—6 a. m., 72° F. Noon, 85° F. 6 p. m., 81° F.; clear.

September 9.—6 a. m., 75° F. Noon, 88° F. 6 p. m., 82° F.; clear.

September 10.—6 a. m., 75° F. Noon, 86° F. 6 p. m., 80° F.; clear.

September 11.—6 a. m., 70° F.; clear. Noon, 82° F. 6 p. m., 76° F.; cloudy.

General remarks.—Some of the lower leaves are now turning yellow.

REPORT FOR WEEK ENDING SEPTEMBER 18, 1897.

September 12.—6 a. m., 78° F. Noon, 82° F. 6 p. m., 76° F.; clear.

September 13.—6 a. m., 64° F. Noon, 62° F.; partly cloudy. 6 p. m., 60° F.; rainfall, .17 in.; rain.

September 14.—6 a. m., 60° F. Noon, 76° F. 6 p. m., 72° F.; clear.

September 15.—6 a. m., 46° F. Noon, 60° F. 6 p. m., 60° F.; clear.

September 16.—6 a. m., 56° F. Noon, 90° F. 6 p. m., 80° F.; clear.

September 17.—6 a. m., 62° F.; rainfall, .26 in.; cloudy. Noon, 65° F. 6 p. m., 65° F.; part cloudy.

September 18.—6 a. m., 38° F.; frost. Noon, 65° F. 6 p. m., 72° F.; clear.

General remarks.—We had a hard frost the night of the 17th. The tops of the Klein Wanzlebener grow somewhat larger and ranker than the others.

REPORT FOR WEEK ENDING SEPTEMBER 25, 1897.

September 19.—6 a. m., 55° F. Noon, 65° F. 6 p. m., 57° F.; cloudy.

September 20.—6 a. m., 44° F. Noon, 47° F. 6 p. m., 44° F.; rainfall, .12 in.; part cloudy.

September 21.—6 a. m., 45° F. Noon, 55° F. 6 p. m., 52° F.; clear.

September 22.—6 a. m., 48° F.; part cloudy. Noon, 69° F. 6 p. m., 58° F.; clear.

September 23.—6 a. m., 50° F. Noon, 66° F.; part cloudy. 6 p. m., 52° F.; rainfall, .06 in.; rain.

September 24.—6 a. m., 48° F.; rainfall, .08 in.; rain. Noon, 65° F.; cloudy. 6 p. m., 60° F.; clear.

September 25.—6 a. m., 45° F. Noon, 73° F. 6 p. m., 68° F.; clear.

General remarks.—United States Department of Agriculture, Farmer Bul. No. 52, page 27, says concerning the beet sugar just received from Washington, D. C.: "Harvesting should be postponed to as late a date as possible, providing the beets are in no danger of a second growth and are not exposed to a freezing temperature. The leaves of a ripening beet change from a rich to a yellowish green; become drooping and apply closely to the earth, and many of them die. In general it may be said that beets planted the first week in May will be ready to harvest about the first week in October."

REPORT FOR WEEK ENDING OCTOBER 2, 1897.

September 26.—6 a. m., 58° F.; part cloudy. Noon, 76° F.; cloudy. 6 p. m., 54° F.; rainfall, .08 in.; rain.

September 27.—6 a. m., 44° F.; cloudy. Noon, 60° F. 6 p. m., 59° F.; clear.

September 28.—6 a. m., 30° F.; heavy frost. Noon, 66° F. 6 p. m., 54° F.; clear.

September 29.—6 a. m., 48° F. Noon, 70° F. 6 p. m., 63° F.; clear.

September 30.—6 a. m., 50° F. Noon, 76° F. 6 p. m., 65° F.; clear.

October 1.—6 a. m., 52° F. Noon, 76° F. 6 p. m., 65° F.; clear.

October 2.—6 a. m., 46° F. Noon, 67° F.; clear. 6 p. m., 52° F.; part cloudy.

General remarks.—Upon examination, I find that the lower leaves are dying somewhat, and most of them are drooping, about half of them stand erect, and quite a number of the upper leaves are turning yellow. They have a general appearance of ripening and are also putting out quite a growth of second leaves from one to two inches long. I should judge from appearance that the beets would be fit to harvest in about two weeks.

REPORT FOR WEEK ENDING OCTOBER 9, 1897.

October 3.—6 a. m., 36° F.; part cloudy. Noon, 66° F. 6 p. m., 60° F.; clear.

October 4.—6 a. m., 40° F. Noon, 76° F.; clear. 6 p. m., 56° F.; part cloudy.

October 5.—6 a. m., 42° F. Noon, 74° F. 6 p. m., 63° F.; clear.

October 6.—6 a. m., 50° F. Noon, 58° F. 6 p. m., 52° F.; cloudy.

October 7.—6 a. m., 44° F.; rainfall, .42 in.; rain. Noon 45° F.; cloudy. 6 p. m., 42° F.; clear.

October 8.—6 a. m., 28° F.; clear; frost. Noon, 58° F. 6 p. m., 58° F.; rainfall, .04 in.

October 9.—6 a. m., 40° F. Noon, 50° F. 6 p. m., 40° F.; clear.

General remarks.—The beets have ripened quite rapidly within the past week. On account of the severe cold weather that we have had, I think they ought to be gathered soon.

REPORT FOR WEEK ENDING OCTOBER 16, 1897.

October 10.—6 a. m., 26° F. Noon, 50° F. 6 p. m., 40° F.; clear; frost.

October 11.—6 a. m., 48° F. Noon, 69° F.; clear. 6 p. m., 65° F.; part cloudy.

October 12.—6 a. m., 66° F.; rainfall, .68 in.; rain. Noon, 54° F. 6 p. m., 58° F.; clear.

October 13.—6 a. m., 34° F. Noon, 57° F. 6 p. m., 48° F.; clear.

October 14.—6 a. m., 48° F. Noon, 80° F. 6 p. m., 70° F.; clear.

October 15.—6 a. m., 69° F. Noon, 80° F. 6 p. m., 72° F.; clear.

October 16.—6 a. m., 70° F.; part cloudy. Noon, 79° F. 6 p. m., 76° F.; clear.

General remarks.—The second growth of leaves have quite a start. The beets have ripened considerably the past week; we have had two heavy freezes, Friday and Sunday mornings, 28° and 26°, respectively.

REPORT FOR OCTOBER 17, 18 AND 19, 1897.

October 17.—6 a. m., 40° F.; part cloudy. Noon, 46° F. 6 p. m., 40° F.; cloudy.

October 18.—6 a. m., 23° F. Noon, 45° F. 6 p. m., 40° F.; clear frost.

October 19.—6 a. m., 56° F. Noon, 70° F. 6 p. m., 65° F.; clear; finished digging.

General remarks.—We commenced harvesting the beets October 18th, and finished them October 20th. When we came to dig them we found that there was not so much difference in the beets as the appearance showed. The Klein Wanzlebener threw out a little larger top and they were not quite as close together and ran a good deal larger than the Vilmorin Improved. There were more vacant spots in the Klein Wanzlebener than in the Vilmorin Improved. The ground being so dry when we plowed it, there were places where the plow did not run as deep as it ought. When the beets struck the hard surface below the plow, they grew lots of roots and the body round like a turnip. I think they would have been better had they been gathered a week or ten days earlier, on account of the second growth of leaves, from two to four inches in length. The net weight after being washed, trimmed and shrunk was 16,237 pounds.

The weight of the Klein Wanzlebener was 8,091 pounds, and of the Vilmorin Improved 8,146 pounds. There was only a small portion of this ground that had any manure on it the year before. The previous year the whole plant was put into potatoes, except a couple of rows that was run into green snarl. No manure was put on this year, nothing but the fertilizer you sent me. Those on the greensward were treated the same as the others, but they yielded more roots and less beets than any other two rows on the plant. My best observations are that they have not grown any for the past two weeks, on account of the dry weather.

MODE OF HARVESTING.

First, we took a sharp hoe and trimmed the tops off, a few rows at a time, raked them off and then run a plow from eight to ten inches deep as close as possible on one side of them, and then took potato hooks and pulled them into the furrow. Then picked them up, rapping them together to remove the dirt; then put them in crates, repeating the same until we had a load; then took them to the cellar and weighed them. I believe if the seed had all come, we would have raised at least ten tons off from half an acre. There were places from two, three and as high as ten feet that there would not be any beets. I would not advise as a method transplanting, unless it could be done very early. A good many of our transplanted beets were six inches to a foot long, and varied from the size of an egg down to a lead pencil. We transplanted these beets from the 10th to the 14th of July.

JAMESON N. WITHEREL,
Experimenter.

ARCADE, N. Y., *October* 24, 1897.

An examination of the above reports shows that from the time of planting the seeds to the harvesting of the beets was 95 days; making 13 4-7 weeks; that the whole amount of rainfall in the whole time upon the beets was 10.53 in.; that the average rainfall per month was 3.30; that the average rainfall per week was .77; and that the average rainfall per day was .11; the amount of beets raised upon the patch would indicate that that soil would raise 16.18 tons of Klein Wanzlebener per acre and 16.29 tons of Vilmorin Improved per acre; the analysis of the beets shows that the Klein Wanzlebener beets there raised would produce 12.40 percentage of sugar and the Vilmorin Improved 14.12 percentage of sugar. This would indicate that that soil would raise beets that would produce 4,013 pounds of sugar per acre from the Klein Wanzlebener and 4,600.80 pounds of sugar per acre from the Vilmorin Improved, provided that in the process of manufacturing all the sugar is recovered.

EXPENSE OF RAISING BEETS,

Including rent of land, compensation of superintendent of cultivation and miscellaneous accounts.

PATCH No. 1.

Date.		
July 8.	Plowing, harrowing, planking, measuring and marking plot, sowing seed, repairing rain gauge, applying fertilizer and hoeing	$10 00
Aug. 14.	Hoeing and weeding	13 20
Sept. 10.	Hoeing	14 40
Nov. 24.	Supervision, land, etc	26 50

PATCH No. 2.

Date.		
July 8.	Plowing, subsoiling, harrowing, sowing fertilizer, rolling, sowing seed, hoeing and cultivating	$8 70
Sept. 10.	Hoeing, cultivating and thinning	12 70
Oct. 25.	Hoeing and cultivating	4 60
Nov. 24.	Supervision, land, etc	21 40

PATCH No. 3.

Date.		
July 8.	Plowing, dragging, surfacing and drilling in seeds	$5 00
Dec. 3.	Lease of ground, keeping records, cultivating, harvesting, expressage etc.	46 25

PATCH No. 4.

Date.		
July 8.	Plowing, harrowing, sowing phosphate, drilling, sowing seed, hoeing and cultivating one acre ground	$14 33
Sept. 10.	Pulling weeds out of beets	7 00
Aug. 14.	Thinning, cultivating and pulling out weeds	9 50
Nov. 24.	Supervision, land, etc	25 00

PATCH No. 5.

Date.		
July 8.	Plowing, harrowing, smoothing, sowing phosphate and running weeder	$16 64
Aug. 14.	Weeding and thinning	8 12
Nov. 24.	Supervision, land, etc	27 29

PATCH No. 6.

Date.		
July 8.	Plowing, fitting, planting, freight on phosphate, and weeding	$4 65
Aug. 14.	Weeding and thinning, transplanting and hoeing	14 00
Nov. 24.	Supervision, land, etc	24 90

PATCH No. 7.

Date.		
Sept. 10.	Hoeing beets	$3 75
Aug. 14.	Cultivating and weeding beets	9 70
	Plowing, dragging, sowing seed, weeding and cultivating	7 62
Nov. 24.	Supervision, land, etc	33 25

PATCH No. 8.

Date.		
July 8.	Plowing, dragging, sowing phosphate and beets, cultivating, weeding, hoeing and transplanting	$12 74
Aug. 14.	Hoeing, weeding, cultivating and thinning beets	10 20
Sept. 10.	Pulling weeds	1 50
Nov. 24.	Supervision, land, etc	30 30

PATCH No. 9.

Date.		
July 8.	Plowing, rolling, harrowing, picking stones, planting seed, cultivating and hoeing	$10 35
Nov. 24.	Supervision, land, etc	24 00

PATCH No. 10.

Date.		
July 8.	Plowing, cultivating, sowing seed and phosphate, replanting seeds, weeding, and freight on phosphate	$11 35
Aug. 14.	Cultivating, weeding and transplanting beets	15 00
Sept. 10.	Cultivating and weeding	7 50
Oct. 25.	Cultivating	6 00
Nov. 24.	Supervision, land, etc	32 50

PATCH No. 11.

Date.		
July 8.	Plowing, sowing seed, weeding and cultivating	$13 50
Aug. 14.	Cultivating and sowing phosphate, cleaning and thinning, weeding and cultivating	14 37
Nov. 24.	Supervision, land, etc	27 30

PATCH No. 12.

Date.		
Aug. 14.	Scraping, thinning, cultivating	$9 15
	Plowing, cultivating, putting on phosphate	4 50
Nov. 24.	Supervision, land, etc	42 66

PATCH No. 13.

Date.		
Aug. 14.	Plowing, fitting ground, sowing beet seeds, cultivating, putting on phosphate, weeding and transplanting	$6 50
Sept. 10.	Cultivating and weeding beets	5 50
Nov. 24.	Supervision, land, etc	32 50

PATCH No. 14.

Date.		
July 8.	Use of land for sugar beets, plowing, harrowing, rolling, fertilizing, ridging, drilling, cultivating	$6 43
Aug. 14.	Cultivating, weeding, transplanting and thinning	13 00
Nov. 24.	Supervision, land, etc	28 60

EXPENSE ACCOUNT FOR PATCHES.

The expense of cultivating the above fourteen patches and providing the necessary material with which to do it is as follows, namely:

MISCELLANEOUS ACCOUNTS.

DATES.	Statement of moneys expended by the Commissioner of Agriculture under the provisions of chap. 500, Laws of 1897.	Fares.	Hotels.	Expressage.	Postage and stationery.	Purchases.	Compensation.
1897.							
June 16	Arthur Flanders, on May 26	$11 84	$2 00	......	......	......	......
June 16	Paid Halstead & Pierson, fertilizers	......	......	......	......	$58 85	......
June 16	Paid August Rolker & Sons, seeds	......	......	......	......	28 75	......
June 16	Paid Schneider Bros., rain gauges	......	......	......	......	27 00	......
June 16	Paid National Express Co	......	......	$3 55	......	......	......
June 16	Paid American Express Co	......	......	6 85	......	......	......
June 16	Paid postage stamps	......	......	......	$12 00	......	......
July 18	Paid Price & Reed, fertilizers, etc	......	......	......	......	166 39	......
Aug. 14	Paid American Express Co	......	......	2 95	......	......	......
Aug. 14	Paid National Express Co	......	......	1 25	......	......	......
Aug. 14	Paid Brandow Printing Co	......	......	......	......	16 79	......
Aug. 14	Paid I S Mathews Sons, fertilizer	......	......	......	......	22 50	......
Nov. 24	Paid Brandow Printing Co	......	......	......	16 55	......	......
		$11 84	$2 00	$14 60	$28 55	$320 28	$360 72

FRANK WIETING, SUPERINTENDENT OF CULTIVATION.

DATES.	Statement expenditures by Commissioner of Agriculture.	Fares.	Hotels.	Livery.	Telegrams and messages.	Compensation.
June 16	Fares	$6 90	$5 50	......	......	$20 00
July 8	Car fares and hotel	16 82	12 00	......	......	......
Aug. 14	Compensation	......	......	......	......	60 00
Aug. 14	Car fares and hotel	21 70	15 00	1 00	$0 25	......
Sep. 10	Compensation	......	......	......	......	60 00
Sep. 10	Car fares and hotel	18 96	13 00	2 00	......	......
Oct. 25	Compensation	......	......	......	......	60 00
Oct. 25	Compensation, car fare, hotels, etc	26 93	14 00	1 50	......	60 00
		$91 31	$59 50	$4 50	$ 25	$260 00

While the figures set forth above will fairly represent certain facts, they will mean more of course to some than to others. To me they are not conclusive, but suggestive that the raising of sugar beets within the State of New York can be made fairly profitable if conditions are right. I am of the opinion that if it could meet the approval of the Legislature, it would be wise to continue these experiments for one or two years more before advising the investment of capital in the amounts that would be necessary to establish sugar beet plants in different portions of the State of New York. A sugar plant is very expensive and no encouragement should be given to establish one or more of them unless it is of a nature that will warrant a continuance of the work; that is to say, I do not believe that either the Commissioner of Agriculture or the Chief Executive of the State should announce to the public that the experiments of one season by the Department of Agriculture had demonstrated beyond a doubt that sugar beets can be grown in this State to advantage and profit for the manufacture of sugar. While the few experiments we have made would seem to indicate that, I respectfully call attention to the fact that this year may be different from next, or the one following, and that a series of such experiments should be performed before making an unqualified statement to the people on the subject.

Samples of each kind of beets planted on these fourteen different patches were carefully taken, placed in bags and shipped by express by the parties raising the same to Prof. W. H. Jordan, at the New York Agricultural Experiment Station, at Geneva, N. Y., for analysis.

The instructions sent to each party raising the beets relative to sending them to Geneva, read as follows:

SUGGESTIONS BY THE COMMISSIONER OF AGRICULTURE AS TO GATHERING BEETS AND SENDING SAMPLES OF THE SAME TO THE GENEVA EXPERIMENT STATION.

First. Gather the crop next week, or as soon thereafter as in your judgment the conditions require; if for any reason the crop is ready and should be harvested, do so immediately. Any second growth or indication of the same in the beet tops, is an indication for the necessity of an immediate harvest.

Second. Take 100 pounds of the beets as they average in size, wash and cut off top so that all that is left of the beets will be fit for manufacturing into sugar, then weigh them, find the percentage of the loss of weight from the hundred pounds thus taken, this will be the percentage of the weight that should be deducted from the entire weight of the beets raised. Do this with each quarter of an acre, that is, treat the Vilmorin Improved and the Klein Wanzlebener separately in the manner above described.

Third. Take a sample of fifty pounds of each kind of beets after they are cleaned and trimmed, put each in a strong canvas bag and place in said bag a card properly filled out, that we will send you for that purpose; this card will contain the information necessary for identification. Then take the said beets to the nearest express office and express them to Dr. W. H. Jordan, director of the Geneva Experiment Station, Geneva, N. Y., paying the express charges in advance and charging the same up in your account to this Department.

Fourth. Inclose in each sack a tin can full of the soil in which the beets represented in that sack were grown, tie or fasten the cover on the can in such way that the dirt cannot spill out in shipping. Prepare and send the beets to Prof. Jordan as quickly as possible after harvesting. Write this office immediately upon so doing, so that we may notify that station by wire that the beets are en route. In writing us, please give the name of the express company by which beets were sent and the date of sending. When you have done this, please then make a report to this office on the usual weekly blank, setting forth all the history of the beets which you have not previously given, as to the harvesting, etc., and state the amount of beets grown on each quarter of an acre in tons.

The beets were duly received and analyzed by Dr. L. L. Van Slyke, or under his supervision, and the report he made to us is as follows:

	VILMORIN IMPROVED, PER CENT SUGAR IN			KLIEN WANZLEBENER, PER CENT SUGAR IN		
	Beet	Juice.	Purity.	Beet.	Juice.	Purity.
Patch No. 1, situated in Albany county	15.14	15.93	81.1	15.	15.79	78.8
Patch No. 2, situated in Chautauqua county.	14.6	15.4	73.9	15.	15.9	75.9
Patch No. 3, situated in Chautauqua county.	......	......	......	13.70	14.42	78.4
Patch No. 4, situated in Columbia county....	15.72	16.55	78.4	15.18	15.98	79.4
Patch No. 5, situated in Cortland county.....	14.14	14.88	74.7	12.74	13.42	73.5
Patch No. 6 situated in Genesee county. ..	13.4	14.1	74.2	12.8	13.48	72.8
Patch No. 7, situated in Lewis county........	14.6	15.37	78.3	15.8	15.87	79.5
Patch No. 8, situated in Madison county	15.64	16.46	85.	14.6	15.37	74.1
Patch No. 9, situated in Monroe county.......	14.4	15.16	75.8	15.76	16.59	86.3
Patch No. 10, situated in Oneida county......	14.6	15.37	78.9	14.24	14.99	77.4
Patch No. 11. situated in Schoharie county...	13.70	14.42	78.7	12.24	12.88	71.2
Patch No. 12, situated in Schoharie county...	14.12	14.86	77.2	13.50	14.21	75.5
Patch No 13, situated in St. Lawrence county.	.16.6	17.48	83.5	14.68	15.45	78.7
Patch No. 14, situated in Wyoming county...	14.12	14.86	74.3	13.40	13.5	71.9

I, therefore, recommend a reasonable appropriation for the coming year for more experiments.

BEET SUGAR FACTORY.

There is but one beet sugar factory in this State in operation. It is known as the First New York Beet Sugar Company and is situated at Rome, N. Y.; the factory being one mile west of the city of Rome on the line of the Erie Canal. The articles of incorporation of the said factory were filed with the Secretary of State on the 25th day of September, 1896, and are as follows:

CERTIFICATE OF INCORPORATION OF THE FIRST NEW YORK BEET SUGAR COMPANY.

STATE OF NEW YORK,
ONEIDA COUNTY, } ss.:

We, the undersigned, for the purpose of forming a corporation pursuant to the provisions of the Business Corporation Law, all being of full age, two-thirds being citizens of the United States and a majority residents of the State of New York, do hereby certify:

First. The name of the proposed corporation is "First New York Beet Sugar Company."

Second. The purpose or purposes for which it is to be formed are the manufacture and sale of sugar, and the location of its business shall be within the United States of America, Canada and other countries.

Third. The amount and description of its capital stock will be three hundred thousand dollars, of which one hundred and fifty thousand dollars will be common stock and one hundred and fifty thousand dollars will be preferred stock as hereinafter mentioned.

Fourth. The number of shares of which the capital stock shall consist will be thirty thousand, of which there will be fifteen thousand shares of common stock and fifteen thousand shares of preferred stock. Each share will be of the par value of ten dollars. The amount of capital with which said corporation will begin business will be one thousand dollars.

Fifth. The location of its principal business office is to be in the city of Utica, county of Oneida, State of New York.

Sixth. The duration of said corporation is to be fifty years.

Seventh. The number of its directors is to be nine each of whom is to hold at least five shares of the stock.

Eighth. The names and the post-office addresses of the directors for the first year are as follows:

Names.	Post-office address.
Wallace Clark	Utica, N. Y.
George E. Farrell	Utica, N. Y.
Joseph B. Melbach	Utica, N. Y.
Arthur Clinton Howe	Utica, N. Y.
Warren R. Fitch	Lowville, N. Y.
Theodore Avery	Utica, N. Y.
Edward Kanaley	Syracuse, N. Y.
T. Harvey Ferris	Utica, N. Y.
Volney G. Pfluke	Utica, N. Y.

Ninth. The names and the post-office addresses of the subscribers of this certificate and the number of shares of stock which each agrees to take in said corporation are as follows:

NAMES.	Address.	Number of shares.
Wallace Clark	Utica, N. Y	10
George E. Farrell	Utica, N. Y	10
Joseph B. Melbach	Utica, N. Y	10
Arthur Clinton Howe	Utica, N. Y	10
Warren R. Fitch	Lowville, N. Y.	10
Theodore Avery	Utica, N. Y.	10
Edward Kanaley	Syracuse, N. Y	10
T. Harvey Ferris	Utica, N. Y	10
Volney G. Pfluke	Utica, N. Y	10

Tenth. The preferred stock of said corporation shall be issued upon the condition and shall be entitled to draw from the net earnings of said corporation dividends at the rate of six per cent. per annum of the par value thereof, payable as follows: Such dividends as the holders of such preferred stock shall become entitled to receive from the net earnings of said corporation the first day of January of each year shall be paid on or before the first day of February then following if the entire earnings of such corporation for the period since the payment of such corporation shall not be sufficient to pay such dividends upon such preferred stock; if during any such period the earnings of such corporation shall not be sufficient to pay such dividends in full the deficiency shall be paid from the earnings of said corporation for the succeeding period or periods, if sufficient for that purpose after payment of the aforesaid dividends upon such preferred stock for such succeeding period or periods; no dividends shall be paid upon the common stock until all dividends as aforesaid then due upon the preferred stock shall be paid in full; after such payments of dividends upon the preferred stock the surplus net earnings of said corporation, if any, may be distributed as dividends upon the common stock. Upon the dissolution of said corporation the holders of such preferred stock shall be entitled to receive from the assets of said corporation the par value thereof, if there shall be sufficient assets for the payment of the same, and if there shall not be sufficient assets for that purpose the holders of said preferred stock shall be entitled to have such assets as there may be divided among them in proportion to the number of shares held by them; the assets of said corporation, if any, remaining after the payment of the par value of said preferred stock shall be distributed among the holders of the common stock in proportion to the number of shares held by them, the holders of preferred stock shall be entitled in any event only to receive dividends at the rate of six per cent. per annum and upon the dissolution of said corporation the holders of said preferred stock shall be entitled to receive of the assets thereof only the amount of the par value of said stock. The first dividend declared on each share of preferred stock shall be computed at the rate aforesaid from the date of its issue.

It shall be the duty of the directors of said corporation on the first day of January of each year during the existence thereof, or as soon thereafter as the same can be done to take and make, or cause to be taken and made, a true inventory and account of all the assets and liabilities of said corporation as of the first day of January, and if the net earnings thereof for the period to which dividends on the preferred stock have been fully paid are sufficient to pay the dividend to which the preferred stock is entitled to declare such dividend, and if not sufficient therefor, to distribute said earnings, if any, among the holders of said preferred stock according to the amounts held by them respectively.

In witness whereof we have hereunto subscribed our names and affixed our seals this 7th day of September, 1896.

WALLACE CLARK.
GEORGE E. FARRELL.
JOSEPH B. MELBACH.
ARTHUR CLINTON HOWE.
WARREN R. FITCH.
THEODORE AVERY.
EDWARD KANALEY.
T. HARVEY FERRIS.
VOLNEY G. PFLUKE.

(Executed in duplicate.)

On the 15th day of September, 1897, the secretary and treasurer, Mr. Edward Kanaley, filed in this office the following statement:

ALBANY, N. Y., *September* 15, 1897.

HON. CHAS. A. WIETING,
Commissioner of Agriculture,
Albany, N. Y.:

Dear Sir.—You are hereby notified that the First New York Beet Sugar Company is a corporation organized pursuant to the Business Corporation Laws of the State of New York, and its corporate papers filed in the office of the Secretary of State in the city of Albany, N. Y., on the 25th day of September, 1896; that the officers of said corporation are: President, Vice-President, Secretary and Treasurer; that the location of the factory of the said corporation is at Rome, N. Y., and its principal business office at Utica, N. Y.; that the capitalization is three hundred thousand dollars; that the said corporation will begin September 23, 1897, the manufacture of more than two thousand pounds per day sugar from beets raised entirely within the State of New York and for which said corporation will pay the producer five dollars net per ton on the 31st day of December, 1897; that this corporation will apply for and expect to receive its distributive, proportionate and proper shares of the moneys appropriated by chapter 500 of the Laws of 1897, to be distributed by you to manufacturers of beet sugar within the State of New York under the conditions named in this chapter; and we hereby request you to designate the officials provided for in the said chapter for the purpose of weighing beets and inspecting said sugar and to take such other steps as may be necessary on your part to entitle this corporation to receive the moneys applied for. We desire you to designate an inspector and weighman and an assistant weighman as the amount of work to be performed will necessitate these appointments, at least.

FIRST NEW YORK BEET SUGAR COMPANY.
EDWARD KANALEY,
Secretary.

In accordance with the law I appointed a weigher and two assistant weighers at the said factory, and a sugar inspector. The weigher appointed was Hon. C. W. Porter, of North Western, N. Y. The assistant weighers were John W. Calkins, of Cobleskill, N. Y., and Mr. Charles E. Wardwell, of Rome, N. Y. The inspector was C. O. Zimmerman, M. D., of Rome, N. Y. Reports of the inspector of the amount and care of the sugar manufactured were made weekly to this office. All the facts therein recorded were facts known to the inspector except as to the purity of the sugar, which was determined by Dr. H. W. Wiley, Chief Chemist of the United States Department of Agriculture. The reports of Dr. Zimmerman are as follows:

The report of the Chief Weigher, Hon. C. W. Porter, shows that he commenced weighing the beets at the First New York Beet Sugar Company's factory at Rome, N. Y., on the 17th day of October, 1897; that he continued to weigh the beets received there and kept the records in accordance with the requirements of the statute; that from the 17th day of October, 1897, until the 20th day of November, 1897, he received as said weigher tons of sugar beets to be manufactured into sugar at the aforesaid factory.

From these beets this company made sugar, as shown in the report of C. O. Zimmerman, M. D., as follows:

REPORT OF SUGAR BEET INSPECTOR AT THE FIRST NEW YORK BEET SUGAR FACTORY FOR 1897.

Date of weighing sugar.	Number of original packages weighed.	Weight of each package.	Aggregate weight of sugar for day.	Number of packages of sugar from which samples for composite sample were taken.	Date of sending samples to chemist.	Name and address of chemist to whom sample sent.	How sample sealed and stamped.	How sample sent chemist.	Weight of sample sent chemist.	Marks of identification on sample sent chemist.	Date report of chemist received.	Per cent. of crystalized sugar shown by report of chemist.	Date of branding per cent. of crystalized sugar on package.
1897.		Pounds.	Pounds.						Pounds.				
Oct. 13	81	100	8,100	8	Oct. 13	Dr. H. W. Wiley......	Canned.......	Mail.........	1	1	Oct. 18	99.7	Oct. 19
Oct. 14	99	100	9,900	9	Oct. 14	Dr. H. W. Wiley......	Soldered......	Mail.........	1	2	Oct. 18	99.7	Oct. 19
Oct. 15	115	100	11,500	11	Oct. 15	Dr. H. W. Wiley......	Soldered......	Mail.........	1	3	Oct. 20	99.4	Oct. 21
Oct. 16	77	100	7,700	7	Oct. 16	Dr. H. W. Wiley......	Soldered.....	Mail........	1	4	Oct. 20	99.2	Oct. 21
Oct. 18	105	100	10,500	10	Oct. 18	Dr. H. W. Wiley......	Canned.......	Am. Ex.....	1	5	Oct. 22	99.2	Oct. 23
Oct. 19	78	100	7,800	7	Oct. 19	Dr. H. W. Wiley......	Soldered......	Am. Ex.....	1	6	Oct. 22	99.1	Oct. 23
Oct. 20	123	100	12,300	12	Oct. 20	Dr. H. W. Wiley......	Soldered......	Mail.........	1	7	Oct. 22	99.8	Oct. 23
Oct. 21	149	100	14,900	14	Oct. 21	Dr. H. W. Wiley......	Soldered......	Mail.........	1	8	Oct. 25	99.4	Oct. 26
Oct. 22	92	100	9,200	9	Oct. 22	Dr. H. W. Wiley......	Soldered.....	Mail.........	1	9	Oct. 29	99.5	Oct. 30
Oct. 23	69	100	6,900	7	Oct. 23	Dr. H. W. Wiley......	Soldered.....	Mail.........	1	10	Oct. 29	99.4	Oct. 30
Oct. 23	2	300	600	7	Oct. 23	Dr. H. W. Wiley......	Soldered......	Mail.........	1	10	Oct. 29	......	Oct. 30
Oct. 25	43	300	12,900	14	Oct. 25	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	11	Oct. 30	99.3	Oct. 30
Oct. 27	88	100	8,800	10	Oct. 27	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	12	Oct. 30	99.2	Oct. 30
Oct. 27	5	300	1,500	....	....	....	....	....	....	......	....	......	....
Oct. 28	100	100	10,000	10	Oct. 28	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	13	Oct. 30	99.4	Oct. 30
Oct. 29	185	100	18,500	18	Oct. 29	Dr. H. W. Wiley......	Glass jar.....	Mail.........	1	14	Nov. 1	99.3	Nov. 2
Oct. 30	130	100	13,000	13	Oct. 30	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	15	Nov. 1	99.3	Nov. 2
Nov. 1	165	100	16,500	16	Nov. 1	Dr. H. W. Wiley.....	Glass jar......	Mail.........	1	16	Nov. 4	99.3	Nov. 5
Nov. 2	39	100	3,900	3	Nov. 2	Dr. H. W. Wiley.....	Glass jar......	Mail.........	1	17	Nov. 6	99.3	Nov. 6
Nov. 4	......	....	....	....	....	None sacked..........	....	....	....	......	....	......	....
Nov. 5	57	100	5,700	5	Nov. 5	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	19	Nov. 9	99.2	Nov. 9
Nov. 5	66	100	6,600	6	Nov. 6	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	20	Nov. 11	99.2	Nov. 11
Nov. 8	147	100	14,700	15	Nov. 8	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	21	Nov. 11	98.8	Nov. 12
	61	100	6,100	6	Nov. 8	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	22	Nov. 11	99.3	Nov. 12
Nov. 9	93	100	9,300	9	Nov. 9	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	23	Nov. 13	99.5	Nov. 14
Nov. 10	23	100	2,300	2	Nov. 10	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	24	Nov. 13	99.6	Nov. 14
Nov. 11	104	100	10,400	10	Nov. 11	Dr. H. W. Wiley......	Glass jar......	Mail.........	1	25	Nov. 16	99.3	Nov. 17

Nov. 12	135	100	13,500	13	Nov. 12	Dr. H. W. Wiley	Glass jar	Mail	1	26	Nov. 16	95.0	Nov. 17
	77	100	7,700	7	Nov. 12	Dr. H. W. Wiley	Glass jar	Mail	1	27	Nov. 16	99.4	Nov. 17
Nov. 13	67	100	6,700	6	Nov. 13	Dr. H. W. Wiley	Glass jar	Mail	1	28	Nov. 16	99.8	Nov. 17
	100	100	10,000	10	Nov. 13	Dr. H. W. Wiley	Glass jar	Mail	1	29	Nov. 16	95.5	Nov. 17
Nov. 15	107	100	10,700	10	Nov. 15	Dr. H. W. Wiley	Glass jar	Mail	1	30	Nov. 22	99.7	Nov. 28
Nov. 15	60	100	6,000	6	Nov. 15	Dr. H. W. Wiley	Glass jar	Mail	1	31	Nov. 22	94.5	Nov. 23
Nov. 16	100	100	10,000	10	Nov. 16	Dr. H. W. Wiley	Glass jar	Mail	1	32	Nov. 22	99.4	Nov. 28
Nov. 17	100	100	10,000	10	Nov. 17	Dr. H. W. Wiley	Glass jar	Mail	1	33	Nov. 22	93.5	Nov. 23
Nov. 17	60	100	6,000	6	Nov. 17	Dr. H. W. Wiley	Glass jar	Mail	1	34	Nov. 22	99.6	Nov. 23
Nov. 18	55	100	5,500	5	Nov. 18	Dr. H. W. Wiley	Glass jar	Mail	1	35	Nov. 22	99.6	Nov. 23
Nov. 19	137	100	13,700	13	Nov. 19	Dr. H. W. Wiley	Glass jar	Mail	1	36	Nov. 26	99.6	Nov. 26
Nov. 20	104	100	10,400	10	Nov. 20	Dr. H. W. Wiley	Glass jar	Mail	1	37	Nov. 26	95.5	Nov. 27
Nov. 20	55	100	5,500	5	Nov. 20	Dr. H. W. Wiley	Glass jar	Mail	1	38	Nov. 26	99.6	Nov. 27
Nov. 22	125	100	12,500	12	Nov. 22	Dr. H. W. Wiley	Glass jar	Mail	1	39	Nov. 27	99.4	Nov. 27
Nov. 23	107	100	10,700	10	Nov. 23	Dr. H. W. Wiley	Glass jar	Mail	1	40	Nov. 27	99.6	Nov. 27
Nov. 24	165	100	16,500	16	Nov. 24	Dr. H. W. Wiley	Glass jar	Mail	1	41	Nov. 27	94.6	Nov. 27
Nov. 26	90	100	9.000	9	Nov. 26	Dr. H. W. Wiley	Glass jar	Mail	1	42	Dec 1	94.7	Nov. 29
Nov. 27	120	100	12,000	12	Nov. 27	Dr. H. W. Wiley	Glass jar	Mail	1	43	Dec. 1	95.5	Dec. 2
Nov. 29	120	100	12,000	12	Nov. 29	Dr. H. W. Wiley	Glass jar	Mail	1	44	Dec. 3	95.1	Dec. 4
Nov. 30	105	100	10,500	10	Nov. 30	Dr. H. W. Wiley	Glass jar	Mail	1	45	Dec. 3	94.6	Dec. 4
Dec. 1	100	100	10,000	10	Dec. 1	Dr. H. W. Wiley	Glass jar	Mail	1	46	Dec. 4	94.6	Dec. 6
Dec. 2	150	100	15,000	15	Dec. 2	Dr. H. W. Wiley	Glass jar	Mail	1	47	Dec. 6	94.3	Dec. 6
Dec. 3	140	100	14,000	14	Dec. 3	Dr. H. W. Wiley	Glass jar	Mail	1	48	Dec 8	94.6	Dec. 8
Dec. 4	80	100	8,000	8	Dec. 4	Dr. H. W. Wiley	Glass jar	Mail	1	49	Dec. 8	93.9	Dec. 11
Dec. 6	150	100	15,000	15	Dec. 6	Dr. H. W. Wiley	Glass jar	Mail	1	50	Dec. 10	94.3	Dec. 11
Dec. 7	100	100	10,000	10	Dec. 7	Dr. H. W. Wiley	Glass jar	Mail	1	51	Dec, 10	94.3	Dec. 11
Dec. 8	125	100	12,500	12	Dec. 8	Dr. H. W. Wiley	Glass jar	Mail	1	52	Dec. 11	93.2	Dec. 11
Dec 9	150	100	15,000	15	Dec. 9	Dr. H. W. Wiley	Glass jar	Mail	1	53	Dec. 21	93	Dec. 21
Dec. 10	130	100	13,000	13	Dec. 10	Dr. H. W. Wiley	Glass jar	Mail	1	54	Dec. 21	93	Dec. 21
Dec. 11	85	100	8,500	8	Dec. 11	Dr. H. W. Wiley	Glass jar	Mail	1	55	Dec. 21	94.3	Dec. 23
Dec. 13	150	100	15,000	15	Dec. 13	Dr. H. W. Wiley	Glass jar	Mail	1	56	Dec. 21	92.1	Dec. 22
Dec. 14	100	100	10,000	10	Dec. 14	Dr. H. W. Wiley	Glass jar	Mail	1	57	Dec. 21	92.8	Dec. 22
Dec. 15	105	100	10,500	10	Dec. 15	Dr. H. W. Wiley	Glass jar	Mail	1	58	Dec. 21	93.1	Dec. 22
Dec. 16	....	....	....	....	....	None sacked	....	....	....	......	....	......	....
Dec. 17	....	....	....	....	....	None sacked	....	....	....	......	....	......	....
Dec. 18	....	....	....	....	....	None sacked	....	....	....	......	....	......	....
Dec. 20	....	....	....	....	....	None sacked	....	....	....	......	....	......	....
Dec. 21	125	100	12,500	12	Dec. 21	Dr. H. W. Wiley	Glass jar	Mail	1	59	Dec. 30	93.9	Dec. 30
Dec. 22	150	100	16,000	16	Dec. 22	Dr H. W. Wiley	Glass jar	Mail	1	60	Dec. 30	93.2	Dec. 30
Dec. 23	149	100	14,900	14	Dec. 23	Dr. H. W. Wiley	Glass jar	Mail	1	61	Dec. 30	93.2	Dec. 30
Dec. 24	....	100	....	....	....	None sacked	....	....	....	......	....	......	....
Dec. 25	....	100	....	....	....	None sacked	....	....	....	......	....	......	....

There was manufactured by the First New York Beet Sugar Company between the 13th day of October, 1897, and the 25th day of December, 1897, 319.20 tons or 638,400 pounds of sugar, and that it all contained more than 90 per cent of pure crystallized sugar.

It may not be out of place for me at this time to state what the secretary of the above-named company told me, although the statement does not appear in any of the official reports made from the factory. He said, at the time the seed was purchased for the company, they were unable to procure the amount they wanted of the best sugar varieties and, consequently, they had to supplement by whatever they could find upon the market; the result was the patches of beets were sprinkled with a reddish beet, which was not a good sugar producer. The use of this kind of seed probably reduced the percentage of sugar, therefore the showing is not supposed to be as good as it would have been had the beet seed all been of a thoroughbred variety.

Under the provisions of the statute, namely, chapter 500 of the Laws of 1897, I have apportioned to the First New York Beet Sugar Company at Rome, N. Y., as a premium, one cent per pound on the sugar manufactured there up to the time of making this report. They have manufactured there, as per the above reports, 638,400 pounds of sugar, and the money apportioned them was therefore $6,384. This I have approved and forwarded to the Comptroller in accordance with the requirements of section 76 of the chapter above referred to.

DETAILED STATEMENT OF EXPENDITURES OF MONEY.

The following is a detailed statement of the expenses of this Department for the fiscal year ending September 30, 1897:

DETAILED STATEMENT OF THE SERVICES AND EXPENSES, FOR THE YEAR 1897, OF THE COMMISSIONER, ASSISTANT COMMISSIONERS, EXPERTS, AGENTS, CHEMISTS, COUNSEL, ETC.

NAME.	Position held.	Date.	Services.	Expenses.
C. A. Wieting	Commissioner	1896. October 2	....	$29 34
Geo. L. Flanders	Assistant Commissioner	2	....	*145 15
C. H. Allen	Agent	2	$60 00	31 64
Chas. Burke	do	2	100 00	28 62
Geo. B. Fellows	do	2	....	12 51
J. M. Hutchings	do	2	75 00	....
V. P. D. Lee	do	2	125 00	....
Wm. B. Mynderse	do	2	30 00	2 65
Simon Nussbaum	do	2	100 00	....
E. J. Wheeler	Chemist	2	125 00	7 16
Geo. L. Flanders	Assistant Commissioner	13	208 33	....
Henry S. Ambler	do	16	100 00	36 07
J. P. Clark	do	16	100 00	30 15
Wm. T. Hughes	do	16	100 00	6 18
C. D. Moore	do	16	100 00	4 04
P. H. Parker	do	16	100 00	75 54
Asa L. Twitchell	do	16	100 00	59 52
E. A. Ayers	Agent	16	100 00	60 91
W. J. Bennett	do	16	75 00	40 63
James Boice	do	16	75 00	77 62
Arch. D. Clark	do	16	100 00	55 55
John J. Coughlin	do	16	75 00	36 88

*Hotels and fares, $27.26; postage, stationery, printing, etc., $117.89.

DETAILED STATEMENT, ETC.—(*Continued*).

NAME.	Position held.	Date.	Services.	Expenses.
W. J. Corbett	Agent	1896. October 16	$60 00	$37 49
A. S. Delano	do	16	75 00	20 19
M. Dugan	do	16	75 00	67 64
John R. Earl	do	16	75 00	14 40
M. Galligan	do	16	75 00	14 02
Frank E. Geise	do	16	75 00	14 96
W. W. Hall	do	16	100 00	87 46
P. C. Harp	do	16	75 00	67 62
C. S. Kellogg	do	16	75 00	62 44
P. H. Kelly	do	16	60 00	25 37
John McGuire	do	16	100 00	53 30
A. J. McSweeney	do	16	75 00	53 96
W. W. Meeteer	do	16	100 00	10 25
C. J. Morganstern	do	16	75 00	57 83
Chas. F. Nash	do	16	75 00	57 79
John T. Norton	do	16	100 00	48 40
R. H. Palmer	do	16	75 00	51 59
J. M. Quigley	do	16	75 00	39 43
Wm. B. Reading	do	16	75 00	28 08
H. A. Rees	do	16	100 00	33 99
Hoffman Ruger	do	16	75 00	6 96
Chas. Sears	do	16	15 00	19 41
Geo. A. Smith	do	16	100 00	56 55
C. B. Wakefield	do	16	60 00	52 55
E. S. Wilson	do	16	100 00	72 62

F. E. Englehardt	Chemist	16	6 00	34
Jos. F. Geisler	do	16	106 62	74
S. A. Lattimore	do	16	127 50	....
E. G. Love	do	16	25 00	....
W. E. McDuffie	do	16	30 00	....
John. A. Miller	do	16	115 00	50
F. P. Vandenburgh	do	16	40 00	....
J. C. Wilson	do	16	50 00	....
M. Quigley	Veterinarian	16	500 00	81 28
V. C. Beebe	Assistant Commissioner	19	100 00	37 87
T. Jas. Owens	do	21	100 00	24 63
Geo. D. Babcock	Agent	21	75 00	66 14
Grove Barnum	do	21	75 00	36 00
W. B. Howard	do	21	75 00	48 93
Robt. McAdam, Jr.	do	21	75 00	80 92
Nicholas Van Horne	do	21	75 00	82 64
Theo. Deecke	Chemist	21	20 00	....
Wm. M. Smith	do	21	6 00	34
Geo. L. Flanders	Assistant Commissioner	22	....	*369 50
B. F. Van Valkenburgh	do	24	208 33	27 73
M. T. Morgan	Agent	24	100 00	72 93
C. A. Wieting	Commissioner	29	333 33	....
Geo. B. Fellows	Agent	29	100 00	....
C. H. Allen	do	31	60 00	31 95
George B. Fellows	do	31	....	9 64
J. M. Hutchings	do	31	75 00	....
V. P. D. Lee	do	31	125 00	1 00
M. T. Morgan	do	31	100 00	85 41
Wm. B. Mynderse	do	31	60 00	16 95
Simon Nussbaum	do	31	100 00	....
J. M. Esmay	do	31	15 00	19 02

*Hotels and fares, $4.50; postage, stationery, printing, etc., $365.00.

DETAILED STATEMENT, ETC.—(*Continued*).

NAME.	Position held.	Date.	Services.	Expenses.
		1896.		
Geo. A. Smith	Agent	November 4	$100 00	$68 39
C. A. Wieting	Commissioner	7	....	53 00
Geo. L. Flanders	Assistant commissioner	17	208 33	....
V. C. Beebe	do	20	100 00	70 82
J. P. Clark	do	20	100 00	50 84
Wm. T. Hughes	do	20	100 00	23 81
C. D. Moore	do	20	25 00	3 54
T. Jas Owens	do	20	100 00	21 12
C. R. Payne	do	20	100 00	63 42
S. B. Richardson	do	20	75 00	23 68
Asa L. Twitchell	do	20	100 00	70 60
B. F. Van Valkenburgh	do	20	208 33	9 72
E. A. Ayers	Agent	20	100 00	75 51
Geo. D. Babcock	do	20	75 00	75 87
Grove Barnum	do	20	75 00	49 46
W. J. Bennett	do	20	75 00	62 48
Geo. Bernhard	do	20	75 00	45 09
James Boice	do	20	75 00	74 00
Chas. Burke	do	20	100 00	25 87
Arch D. Clark	do	20	100 00	68 00
W. J. Corbett	do	20	60 00	31 66
John J. Coughlin	do	20	75 00	11 89
A. S. Delano	do	20	100 00	9 45
M. Dugan	do	20	75 00	71 85
John R. Earl	do	20	75 00	22 61

M. Galligan	do	20	75 00	18 03
W. W. Hall	do	20	100 00	89 86
W. B. Howard	do	20	75 00	54 93
J. M. Hutchings	do	20	....	23 75
Chas. S. Kellogg	do	20	75 00	55 84
P. H. Kelly	do	20	60 00	12 50
Robt. McAdam, Jr.	do	20	75 00	68 42
John McGnire	do	20	100 00	65 83
A. J. McSweeney	do	20	75 00	50 80
W. W. Meeteer	do	20	100 00	....
C. J. Morganstern	do	20	75 00	48 16
John T. Norton	do	20	100 00	61 80
Chas. F. Nash	do	26	75 00	76 03
R. H. Palmer	do	20	75 00	63 06
J. M. Quigley	do	20	75 00	36 02
W. B. Reading	do	20	75 00	12 29
H. A. Rees	do	20	100 00	44 42
Geo. A. Smith	do	20	100 00	22 50
Nicholas Van Horne	do	20	75 00	64 23
C. B. Wakefield	do	20	60 00	50 34
E. S. Wilson	do	20	100 00	59 65
Geo. W. Cavanaugh	Chemist	20	30 00	1 50
Theo. Deecke	do	20	10 00	....
Jos. F. Geisler	do	20	94 62	25
S. A. Lattimore	do	20	45 00	....
E. G. Love	do	20	17 50	....
John A. Miller	do	20	100 00	....
H. E. Nims	do	20	12 00	....
Wm. M. Smith	do	20	24 00	98
Stillwell & Gladding	do	20	2 50	25
F. P. Vandenburgh	do	20	95 00	....

DETAILED STATEMENT, ETC. — (*Continued*).

NAME.	Position held.	Date.		Services.	Expenses.
		1896.			
J. C. Wilson	Chemist	November	20	$50 00	$28 64
Geo. L. Flanders	Assistant commissioner		20	....	*363 58
Chas. Sears	Agent		20	75 00	73 55
Henry S. Ambler	Assistant commissioner		20	100 00	42 68
E. J. Wheeler	Chemist		20	125 00	....
Chas. A. Wieting	Commissioner	December	1	333 33	....
Geo. B. Fellows	Agent		1	100 00	....
V. P. D. Lee	do		1	125 00	....
J. M. Hutchings	do		1	75 00	....
C. A. Wieting	Commissioner		2	....	12 39
Chas. Burke	Agent		2	100 00	15 58
F. E. Geise	do		2	75 00	9 79
Wm. H. Kelly	Veterinarian		2	35 00	10 15
M. T. Morgan	Agent		2	100 00	97 44
W. B. Mynderse	do		2	60 00	6 76
Simon Nussbaum	do		2	100 00	....
Geo. A. Smith	do		2	100 00	85 92
W. E. McDuffie	Chemist		2	15 00	....
C. H. Allen	Agent		2	60 00	28 00
E. J. Wheeler	Chemist		12	150 00	....
Henry S. Ambler	Assistant commissioner		21	100 00	52 65
V. C. Beebe	do		21	100 00	42 61
J. P. Clark	do		21	100 00	37 46
Geo. L. Flanders	do		21	....	†105 56
Wm. T. Hughes	do		21	100 00	16 90

* Hotels and fares, $60.95; department expenses, $302.63. † Hotels and fares, $16.75; department expenses, $88.81.

T. Jas. Owens	do	21	100 00	41 94
Chas. R. Payne	do	21	100 00	43 94
S. B. Richardson	do	21	100 00	33 93
A. L. Twitchell	do	21	100 00	72 59
E. A. Ayers	Agent	21	100 00	42 97
Geo. D. Babcock	do	21	75 00	62 77
Grove Barnum	do	21	75 00	21 65
Geo. Bernhard	do	21	75 00	42 52
W. J. Bennett	do	21	75 00	67 85
James Boice	do	21	75 00	67 92
Arch D. Clark	do	21	100 00	50 35
W. J. Corbett	do	21	60 00	5 74
John J. Coughlin	do	21	75 00	10 15
A. S. Delano	do	21	75 00	21 10
M. Dugan	do	21	75 00	68 03
John R. Earl	do	21	75 00	17 73
M. Galligan	do	21	75 00	10 07
F. E. Geise	do	21	75 00	8 69
W. W. Hall	do	21	100 00	84 52
W. B. Howard	do	21	75 00	21 41
C. S. Kellogg	do	21	75 00	30 00
P. H. Kelly	do	21	60 00	33 89
Robt. McAdam, Jr	do	21	75 00	47 51
John McGuire	do	21	100 00	57 70
A. J. McSweeney	do	21	75 00	48 56
W. W. Meeteer	do	21	100 00	....
C. J. Morganstern	do	21	75 00	25 51
Chas. F. Nash	do	21	75 00	70 11
John T. Norton	do	21	100 00	56 76
R. H. Palmer	do	21	75 00	58 16
Jos. M. Quigley	do	21	75 00	49 89

DETAILED STATEMENT, ETC. — (*Continued*).

NAME.	Position held.	Date.		Services.	Expenses.
		1896.			
Wm. B. Reading	Agent	December	21	$75 00	$22 95
H. A. Rees	do		21	100 00	31 09
Hoffman Ruger	do		21	75 00	31 79
Chas. Sears	do		21	75 00	71 77
Nicholas Van Horne	do		21	75 00	37 41
C. B. Wakefield	do		21	60 00	25 24
E. S. Wilson	do		21	100 00	50 15
Jos. F. Geisler	Chemist		21	174 10	6 87
S. A. Lattimore	do		21	42 50	....
E. G. Love	do		21	66 00	75
John A. Miller	do		21	100 00	....
Wm. M. Smith	do		21	6 00	46
Stillwell & Gladding	do		21	7 50	....
J. C. Willson	do		21	50 00	....
Chas. A. Wieting	Commissioner		23	333 34	....
Geo. L. Flanders	Assistant commissioner		23	208 34	....
Geo. B. Fellows	Agent		23	100 00	....
V. P. D. Lee	do		23	125 00	....
J. M. Hutchings	do		23	75 00	....
B. F. Van Valkenburgh	Assistant commissioner		23	83 28	17 72
F. H. Kracke	do		23	125 05	59 89
E. F. Burke	Agent		23	42 50	8 60
		1897.			
C. A. Wieting	Commissioner	January	5	....	59 98
C. H. Allen	Agent		5	60 00	30 26

Chas. Burke	do	5	100 00	37 08
Geo. B. Fellows	do	5	....	5 82
Wm. B. Mynderse	do	5	60 00	12 91
Simon Nussbaum	do	5	100 00	....
E. J. Wheeler	Chemist	5	150 00	19 98
E. R. Whitney	do	5	12 50	....
J. C. Willson	do	5	50 00	18 90
Geo. L. Flanders	Assistant commissioner	11	....	*501 18
V. C. Beebe	do	18	100 00	46 85
J. P. Clark	do	18	100 00	43 13
Wm. T. Hughes	do	18	100 00	28 52
C. R. Payne	do	18	100 00	54 57
S. B. Richardson	do	18	100 00	20 25
A. L. Twitchell	do	18	100 00	70 85
E. A. Ayers	Agent	18	100 00	44 90
Grove Barnum	do	18	75 00	34 36
W. J. Bennett	do	18	75 00	91 44
Geo. Bernhard	do	18	75 00	77 29
James Boice	do	18	75 00	70 52
Arch D. Clark	do	18	100 00	46 00
John J. Coughlin	do	18	75 00	10 95
W. J. Corbett	do	18	60 00	8 38
A. S. Delano	do	18	75 00	38 38
M. Dugan	do	18	75 00	86 04
John R. Earl	do	18	75 00	11 61
M. Galligan	do	18	75 00	11 57
F. E. Geise	do	18	75 00	10 16
W. W. Hall	do	18	100 00	60 33
C. S. Kellogg	do	18	75 00	40 88
P. H. Kelly	do	18	60 00	2 70
A. J. McSweeney	do	18	50 00	39 00

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*Postage, stationery, printing, etc.

DETAILED STATEMENT, ETC. — (*Continued*).

NAME.	Position held.	Date.	Services.	Expenses.
		1897.		
W. W. Meeteer	Agent	January 18	$100 00	....
M. T. Morgan	do	18	100 00	$93 59
C. J. Morganstern	do	18	75 00	44 00
John T. Norton	do	18	100 00	51 95
R. H. Palmer	do	18	75 00	69 61
Jos. M. Quigley	do	18	75 00	74 06
H. A. Rees	do	18	100 00	16 89
Hoffman Ruger	do	18	75 00	47 01
Geo. A. Smith	do	18	100 00	....
C. B. Wakefield	do	18	60 00	11 70
E. S. Wilson	do	18	100 00	61 55
F. E. Englehardt	Chemist	18	12 00	70
Jos. F. Geisler	do	18	72 50	1 00
S. A. Lattimore	do	18	80 00	....
E. G. Love	do	18	56 25	1 25
W. E. McDuffie	do	18	25 00	3 30
John A. Miller	do	18	100 00	9 70
H. E. Nims	do	18	54 00	....
Stillwell & Gladding	do	18	14 50	50
F. P. Vandenburgh	do	18	15 00	....
M. Quigley	Veterinarian	18	500 00	65 07
Henry S. Ambler	Assistant commissioner	19	100 00	115 58
M. J. Henderson	Veterinarian	19	75 00	23 19
Wm. H. Kelly	do	19	125 00	64 44
V. A. Moore	do	19	....	25 03
F. H. Kracke	Assistant commissioner	27	208 33	125 43

Geo. D. Babcock	Agent		27	75 00	53 45
W. B. Howard	do		27	75 00	24 57
Robt. McAdam, Jr.	do		27	75 00	35 20
John McGuire	do		27	100 00	59 77
Chas. F. Nash	do		27	75 00	75 09
Wm. B. Reading	do		27	75 00	16 10
Nicholas Van Horne	do		27	75 00	38 09
Theo. Deecke	Chemist		27	10 00	....
Wm. M. Smith	do		27	4 00	44
Chas. Sears	Agent		29	75 00	78 15
C. A. Wieting	Commissioner	February	1	333 33	....
Geo. L. Flanders	Assistant Commissioner		1	208 33	....
Geo. B. Fellows	Agent		1	100 00	....
V. P. D. Lee	do		1	125 00	....
John M. Hutchings	do		1	75 00	....
C. H. Allen	do		4	60 00	18 70
Chas. Burke	do		4	100 00	28 00
Geo. B. Fellows	do		4	....	8 75
M. T. Morgan	do		4	100 00	90 65
Wm. B. Mynderse	do		4	60 00	7 61
Simon Nussbaum	do		4	100 00	....
Geo. A. Smith	do		4	100 00	18 55
Maurice Perkins	Chemist		4	50 00	4 36
E. J. Wheeler	do		4	150 00	....
J. C. Willson	do		4	50 00	....
T. Jas. Owens	Assistant Commissioner		4	100 00	30 85
C. A. Wieting	Commissioner		5	....	29 71
Geo. L. Flanders	Assistant Commissioner		20	....	*416 47
E. G. Love	Chemist		20	59 50	1 50
Chas. D. Thomas	Attorney		20	100 00	27 24
Henry S. Ambler	Assistant Commissioner		23	100 00	44 52

*Hotels and fares, $32.10; postage, stationery, printing, etc., $384.37.

DETAILED STATEMENT, ETC. — (*Continued*).

NAME.	Position held.	Date.		Services.	Expenses.
		1897.			
V. C. Beebe	Assistant commissioner	February	23	$100 00	$39 99
J. P. Clark	do		23	100 00	14 08
Wm. T. Hughes	do		23	100 00	23 99
F. H. Kracke	do		23	208 33	63 42
T. Jas. Owens	do		23	100 00	32 81
C. R. Payne	do		23	100 00	52 85
S. B. Richardson	do		23	100 00	34 24
A. L. Twitchell	do		23	100 00	63 12
J. W. Ayers, Adm'r.	Agent		25	44 00	24 94
Geo. D. Babcock	do		23	75 00	33 91
Grove Barnum	do		23	87 30	31 59
W. J. Bennett	do		23	75 00	66 97
Arch D. Clark	do		23	100 00	57 71
John J. Coughlin	do		23	75 00	13 00
W. J. Corbett	do		23	60 00	2 02
A. S. Delano	do		23	75 00	22 18
M. Dugan	do		23	75 00	55 99
John R. Earl	do		23	75 00	14 85
M. Galligan	do		23	75 00	9 60
W. W. Hall	do		23	100 00	39 61
W. B. Howard	do		23	75 00	30 17
Chas. S. Kellogg	do		23	75 00	39 31
P. H. Kelly	do		23	60 00	25 27
V. P. D. Lee	do		23	....	1 60
John McGuire	do		23	100 00	54 70

W. W. Meeteer	do		23	100 00	....
C. J. Morganstern	do		23	75 00	81 56
Chas. F. Nash	do		23	75 00	57 62
John T. Norton	do		23	100 00	58 75
R. H. Palmer	do		23	75 00	38 08
Wm. B. Reading	do		23	75 00	8 70
H. A. Rees	do		23	100 00	19 98
Hoffman Ruger	do		23	25 00	9 79
Chas. Sears	do		23	75 00	64 20
C. B. Wakefield	do		23	60 00	40
E. S. Wilson	do		23	100 00	63 45
Jos. F. Geisler	Chemist		23	187 31	3 73
S. A. Lattimore	do		23	52 50	....
John A. Miller	do		23	105 00	....
H. E. Nims	do		23	10 00	....
Stillwell & Gladding	do		23	32 12	75
F. P. Vandenburgh	do		23	35 00	....
Chas. H. Cook	Veterinarian		23	15 00	....
Wm. H. Kelly	do		23	60 00	35 04
Geo. Bernhard	Agent		24	75 00	58 87
Jos. M. Quigley	do		24	75 00	61 91
C. A. Wieting	Commissioner	March	1	333 33	....
Geo. L. Flanders	Assistant commissioner		1	208 33	....
Geo. B. Fellows	Agent		1	75 00	....
V. P. D. Lee	do		1	125 00	....
John M. Hutchings	do		1	75 00	....
C. A. Wieting	Commissioner		3	....	45 18
C H. Allen	Agent		3	30 00	19 50
Geo. B. Fellows	do		3	....	11 10
Robt. McAdam, Jr.	do		3	75 00	41 81
Wm. B. Mynderse	do		3	30 00	9 81

DETAILED STATEMENT, ETC—(*Continued*).

NAME.	Position held.	Date.	Services.	Expenses.
		1897.		
Simon Nussbaum	Agent	March 3	$100 00	....
Nicholas Van Horne	do	3	75 00	$19 64
E. F. Burke	do	3	60 00	....
V. R. Moore	Veterinarian	3	....	29 96
E. J. Wheeler	Chemist	3	150 00	....
Chas. Burke	Agent	4	75 00	30 14
Henry S. Ambler	Assistant commissioner	16	100 00	62 19
V. C. Beebe	do	16	100 00	57 79
J. P. Clark	do	16	100 00	7 54
Wm. T. Hughes	do	16	100 00	24 10
F. H. Kracke	do	16	208 33	58 01
T. Jas. Owens	do	16	100 00	2 24
C. R. Payne	do	16	100 00	44 24
S. B. Richardson	do	16	100 00	32 61
A. L. Twitchell	do	16	100 00	53 90
Geo. D. Babcock	Agent	16	37 50	22 54
Geo. Bernhard	do	16	75 00	69 88
Arch D. Clark	do	16	80 00	43 20
W. J. Corbett	do	16	30 00	37
John J. Coughlin	do	16	75 00	12 71
A. S. Delano	do	16	75 00	20 12
John R. Earl	do	16	75 00	14 86
M. Galligan	do	16	100 00	29 85
W. W. Hall	do	16	100 00	....
W. B. Howard	do	16	37 50	19 14

C. S. Kellogg	do		16	37 50	36 03
P. H. Kelly	do		16	80 00	5 80
Robt. McAdam, Jr.	do		16	37 50	18 00
John McGuire	do		16	80 00	46 97
M. T. Morgan	do		16	100 00	100 81
C. J. Morganstern	do		16	37 50	82 70
Chas. F. Nash	do		16	37 50	86 39
John T. Norton	do		16	80 00	50 10
Jos. M. Quigley	do		16	75 00	32 68
Wm. B. Reading	do		16	75 00	11 70
H. A. Rees	do		16	50 00	24 37
Chas. Sears	do		16	75 00	57 77
Nicholas Van Horne	do		16	37 50	9 58
C. B. Wakefield	do		16	30 00	....
Geo. W. Cavanaugh	Chemist		16	....	16 10
Jos. F. Geisler	do		16	158 12	1 50
S. A. Lattimore	do		16	5 00	9 00
E. G. Love	do		16	82 00	2 75
J. F. McGregory	do		16	85 00	35 00
John A. Miller	do		16	100 00	22 90
Stillwell & Gladding	do		16	9 37	25
F. P. Vandenburgh	do		16	40 00	8 54
J. C. Willson	do		16	50 00	....
W. J. Wadsworth	Veterinarian		16	21 00	16 64
Geo. L. Flanders	Assistant commissioner		16	....	*341 85
A. C. Goodwin	Printing		16	....	320 50
Henry F. & Jas. Coupe	Attorneys		19	309 50	31 50
W. J. Bennett	Agent		24	37 50	38 60
M. Dugan	do		24	37 50	30 96
J. A. Miller	Chemist		24	40 00	8 50
C. A. Wieting	Commissioner	April	1	333 34	....

*Postage, stationery, printing, etc.

DETAILED STATEMENT, ETC.—(*Continued*).

NAME.	Position held.	Date.	Services.	Expenses.
		1897.		
Geo. L. Flanders	Assistant commissioner	April 1	$208 34	....
Geo. B. Fellows	Agent	1	75 00	....
V. P. D. Lee	do	1	125 00	....
J. M. Hutchings	do	5	75 00	....
C. A. Wieting	Commissioner	5	....	$19 87
Henry S. Ambler	Assistant commissioner	5	100 00	81 70
Geo. L. Flanders	do	5	....	*23 17
C. H. Allen	Agent	5	30 00	28 50
E. F. Burke	do	5	60 00	....
Wm. B Mynderse	do	5	30 00	8 08
Simon Nussbaum	do	5	100 00	....
R. H. Palmer	do	5	37 50	29 45
Geo. A. Smith	do	5	100 00	....
E. S. Wilson	do	5	39 00	12 35
E. J. Wheeler	Chemist	5	150 00	....
J. C. Wilson	do	5	50 00	....
Helen F. Rossman	Stenographer	5	81 00	....
V. C. Beebe	Assistant commissioner	16	100 00	64 92
J. P. Clark	do	16	100 00	36 84
Geo. L. Flanders	do	16	....	†431 40
Wm. T. Hughes	do	16	100 00	19 26
F. H. Kracke	do	16	208 33	61 54
T. Jas. Owens	do	16	100 00	12 00
C. R. Payne	do	16	100 00	33 16
S. B. Richardson	do	16	100 00	27 87

*Hotels and fares. †Postage, stationery, printing, etc.

A. L. Twitchell	do	16	100 00	58 77
Geo. D. Babcock	Agent	16	37 50	7 09
W. J. Bennett	do	16	37 50	44 78
Geo. Bernhard	do	16	75 00	81 15
Arch D. Clark	do	16	80 00	62 06
W. J. Corbett	do	16	30 00	26
John J. Coughlin	do	16	75 00	12 17
A. S. Delano	do	16	75 00	26 51
John R. Earl	do	16	75 00	12 57
M. Galligan	do	16	75 00	9 50
W. W. Hall	do	16	100 00	51 34
W. B. Howard	do	16	37 50	30 20
C. S. Kellogg	do	16	37 50	40 52
Robt. McAdam, Jr.	do	16	37 50	12 87
John McGuire	do	16	80 00	63 76
M. T. Morgan	do	16	100 00	105 15
C. J. Morganstern	do	16	37 50	28 91
Chas. F. Nash	do	16	37 50	33 38
John T. Norton	do	16	80 00	75 05
R. H. Palmer	do	16	37 50	26 00
Jos. M. Quigley	do	16	75 00	42 29
Wm. B. Reading	do	16	75 00	10 40
H. A. Rees	do	16	100 00	82 35
Chas. Sears	do	16	75 00	68 50
Nicholas Van Horne	do	16	37 50	12 44
C. B. Wakefield	do	16	30 00	16 26
Jos. F. Geisler	Chemist	16	158 65	87
S. A. Lattimore	do	16	52 50	6 08
E. G. Love	do	16	96 50	3 00
John A. Miller	do	16	100 00	....
Stillwell & Gladding	do	16	13 75	35

DETAILED STATEMENT, ETC. — (*Continued*).

NAME.	Position held.	Date.	Services.	Expenses.
		1897.		
Frank Wieting	Detective	April 16	$60 00	$20 70
V. A. Moore	Veterinarian	16	....	7 58
M. Quigley	do	16	500 00	173 25
N. Y. Stencil Works	Cheese brands	16	....	35 00
M. Dugan	Agent	23	37 50	40 44
D. C. Reilly	Attorney	23	140 00	56 15
Wm. H. Kelly	Veterinarian	23	10 00	3 94
C. A. Wieting	Commissioner	May 1	333 33	....
Geo. L. Flanders	Assistant commissioner	1	208 33	....
Geo. B. Fellows	Agent	1	75 00	....
V. P. D. Lee	do	1	125 00	....
J. M. Hutchings	do	1	75 00	....
C. A. Wieting	Commissioner	5	....	36 51
C. H. Allen	Agent	5	60 00	26 82
Charles Burke	do	5	75 00	13 39
E. F. Burke	do	5	60 00	31 14
William B. Mynderse	do	5	60 00	7 26
Simon Nussbaum	do	5	100 00	....
E. J. Wheeler	Chemist	5	150 00	....
Henry S. Ambler	Assistant Commissioner	18	100 00	93 66
V. C. Beebe	do	18	100 00	36 29
J. P. Clark	do	18	100 00	42 31
George L. Flanders	do	18	....	*307 43
William T. Hughes	do	18	100 00	31 97
F. H. Kracke	do	18	208 33	51 06

*Postage, stationery, printing, etc.

T. Jas. Owens	do	18	100 00	5 37
C. R. Payne	do	18	100 00	57 83
S. B. Richardson	do	18	100 00	35 78
A. L. Twitchell	do	18	100 00	59 60
W. J. Bennett	Agent	18	75 00	78 72
George D. Babcock	do	18	75 00	83 41
George Bernhard	do	18	75 00	73 24
Arch D. Clark	do	18	80 00	50 75
John J. Coughlin	do	18	75 00	12 31
M. Dugan	do	18	75 00	69 79
John R. Earl	do	18	75 00	13 06
George B. Fellows	do	18	....	4 61
M. Galligan	do	18	75 00	20 81
W. W. Hall	do	18	100 00	74 46
C. S. Kellogg	do	18	37 50	47 19
Robert McAdam, Jr.	do	18	75 00	59 98
John McGuire	do	18	80 00	47 50
M. T. Morgan	do	18	100 00	103 11
C. J. Morganstern	do	18	75 00	25 58
Charles F. Nash	do	18	75 00	45 29
John T. Norton	do	18	80 00	48 15
R. H. Palmer	do	18	75 00	66 52
J. M. Quigley	do	18	75 00	43 13
William B. Reading	do	18	75 00	9 70
H. A. Rees	do	18	100 00	17 96
Charles Sears	do	18	75 00	62 89
Nicholas Van Horne	do	18	75 00	57 46
C. B. Wakefield	do	18	60 00	17 40
C. A. Warren	do	18	20 00	7 10
Joseph F. Geisler	Chemist	18	138 75	4 82
E. G. Love	do	18	61 00	2 00

DETAILED STATEMENT, ETC. — (*Continued*).

NAME.	Position held.	Date.		Services.	Expenses.
		1897.			
John A. Miller	Chemist	May	18	$100 00	$0 50
William M. Smith	do		18	10 00	66
Stillwell & Gladding	do		18	1 87	25
J. C. Wilson	do		18	50 00	....
J. M. Esmay	Agent		18	37 50	27 08
Charles H. Cook	Veterinarian		18	5 00	....
A. D. Wales	Attorney		18	105 00	22 31
New York Stencil Works	Cheese brands		18	....	35 00
C. A. Wieting	Commissioner		29	333 33	....
George L. Flanders	Assistant Commissioner		29	208 33	....
George B. Fellows	Agent		29	75 00	....
V. P. D. Lee	do		29	125 00	....
J. M. Hutchings	do		29	75 00	....
C. A. Wieting	Commissioner	June	4	....	50 34
George L. Flanders	Assistant Commissioner		4	....	*17 99
C. H. Allen	Agent		4	60 00	49 07
E. F. Burke	do		4	75 00	9 40
Chas. Burke	do		4	150 00	22 74
W. J. Corbett	do		4	30 00	2 56
W. B. Howard	do		4	75 00	28 47
William B. Mynderse	do		4	60 00	12 43
Simon Nussbaum	do		4	100 00	....
J. C. Willson	Chemist		4	50 00	....
Henry S. Ambler	Assistant Commissioner		15	100 00	54 66
V. C. Beebe	do		15	100 00	61 88

*Hotels and fares.

Wm. T. Hughes	do	15	100 00	31 50
F. H. Kracke	do	15	208 33	68 85
T. Jas. Owens	do	15	100 00	31 16
C. R. Payne	do	15	100 00	45 46
S. B. Richardson	do	15	100 00	46 40
A. L. Twitchell	do	15	100 00	78 70
Geo. D. Babcock	Agent	15	75 00	70 65
Geo. Bernhard	do	15	75 00	93 09
Arch D. Clark	do	15	80 00	45 44
W. J. Corbett	do	15	60 00	32 92
John J. Coughlin	do	15	75 00	12 40
A. S. Delano	do	15	9 00	4 40
M. Dugan	do	15	75 00	74 23
John R. Earl	do	15	75 00	16 05
J. M. Esmay	do	15	75 00	72 80
M. Galligan	do	15	75 00	27 70
A. L. Haines	do	15	75 00	28 79
W. B Howard	do	15	75 00	28 84
Chas. S. Kellogg	do	15	75 00	70 49
Robt. McAdam, Jr	do	15	75 00	81 56
John McGuire	do	15	80 00	62 91
M. T. Morgan	do	15	100 00	128 01
C. J. Morganstern	do	15	75 00	33 48
Chas. F. Nash	do	15	75 00	19 82
John T. Norton	do	15	80 00	40 90
Jos. M. Quigley	do	15	75 00	62 87
Wm. B. Reading	do	15	75 00	12 70
H. A. Rees	do	15	100 00	73 18
Chas. Sears	do	15	80 00	61 22
C. B. Wakefield	do	15	60 00	20 70
C. A. Warren	do	15	60 00	19 95

DETAILED STATEMENT, ETC.— (*Continued*).

NAME.	Position held.	Date.		Services.	Expenses.
		1897.			
S. A. Lattimore	Chemist	June	15	15 00	3 83
E. G. Love	do		15	73 00	75
W. E. McDuffie	do		15	50 00	....
John A. Miller	do		15	140 00	7 25
Wm. M. Smith	do		15	5 00	2 10
Stillwell & Gladding	do		15	13 15	25
Hugh C. Troy	do		15	75 00	14 80
E. J. Wheeler	do		15	166 66	....
Chas. H. Cook	Veterinarian		15	20 00	....
Wm. H. Kelly	do		15	25 00	21 07
New York Stencil Works	Cheese brands		15	....	35 00
J. P. Clark	Assistant commissioner		15	100 00	49 94
Geo. L. Flanders	do		15	....	*363 55
F. P. Vandenburgh	Chemist		15	45 00	35
S. A. Lattimore	do		25	15 00	....
R. H. Palmer	Agent		25	66 00	46 02
W. J. Bennett	do		25	75 00	80 04
C. A. Wieting	Commissioner	July	1	333 34	....
Geo. L. Flanders	Assistant commissioner		1	208 34	....
Geo. B. Fellows	Agent		1	75 00	....
V. P. D. Lee	do		1	125 00	....
John M. Hutchings	do		1	75 00	....
C. A. Wieting	Commissioner		1	....	13 63
C. H. Allen	Agent		1	60 00	54 55
E F. Burke	do		1	75 00	50 78

*Postage, stationery, printing, etc.

Chas. Burke	do	1	75 00	65 19
Geo. B. Fellews	do	1	....	7 80
A. L. Haines	do	1	75 00	52 11
Wm. B. Mynderse	do	1	60 00	11 16
Simon Nussbaum	do	1	75 00	....
E. J. Wheeler	Chemist	1	166 66	14 28
J. C. Willson	do	1	50 00	....
Nicholas Van Horne	Agent	7	75 00	33 30
V. C. Beebe	Assistant commissioner	20	100 00	51 61
J. P. Clark	do	20	100 00	48 91
Geo. L. Flanders	do	20	....	*243 84
Wm. T. Hughes	do	20	100 00	33 26
F. H. Kracke	do	20	208 33	58 24
T. Jas. Owens	do	20	100 00	26 57
C. R. Payne	do	20	100 00	56 38
S. B. Richardson	do	20	100 00	48 46
A. L. Twitchell	do	20	100 00	68 34
Geo. D. Babcock	Agent	20	75 00	58 30
Grove Barnum	do	20	9 00	8 12
W. J. Bennett	do	20	75 00	78 75
Geo. Bernhard	do	20	75 00	69 40
Arch. D. Clark	do	20	80 00	45 05
W. J. Corbett	do	20	60 00	63 95
John J. Coughlin	do	20	75 00	18 81
A. S. Delano	do	20	6 00	3 96
M. Dugan	do	20	75 00	76 61
John R. Earl	do	20	75 00	32 07
J. M. Esmay	do	20	75 00	93 17
M. Galligan	do	20	75 00	29 64
Robt. McAdam, Jr.	do	20	75 00	67 71
John McGuire	do	20	80 00	46 41

*Postage, stationery, printing, etc.

DETAILED STATEMENT, ETC.—(*Continued*).

NAME.	Position held.	Date.	Services.	Expenses.
		1897.		
M. T. Morgan	Agent	July 20	$100 00	$117 09
Chas. F. Nash	do	20	75 00	63 53
John T. Norton	do	20	80 00	36 95
R. H. Palmer	do	20	69 00	47 45
Jos. M. Quigley	do	29	75 00	33 18
W. B. Reading	do	20	75 00	36 71
H. A. Rees	do	20	100 00	76 41
Chas. Sears	do	20	80 00	58 85
Nicholas Van Horne	do	20	75 00	43 57
Chas. A. Warren	do	20	60 00	32 31
C. B. Wakefield	do	20	60 00	79 56
Theo. Deecke	Chemist	20	110 00	8 50
Jos. F. Geisler	do	20	206 41	6 53
S. A. Lattimore	do	20	15 00	....
E. G. Love	do	20	180 00	5 00
J. E. McGregory	do	20	10 00	....
John A. Miller	do	20	100 00	....
Hugh C. Troy	do	20	75 00	2 50
M. Quigley	Veterinarian	20	500 00	49 09
W. E Walker	Laborer	20	40 00	....
Henry S. Ambler	Assistant commissioner	21	100 00	90 52
C. S. Kellogg	Agent	21	75 00	72 79
C. J. Morganstern	do	21	75 00	49 05
Geo. L. Flanders	Assistant commissioner	27	....	*33 63
W. J. Wadsworth	Veterinarian	27	15 00	....

*Hotels and fares.

F. P. Vandenburgh	Chemist		27	125 00	13 92
Geo. L. Flanders	Assistant commissioner		28	208 33	....
Helen F. Rossman	Stenographer		28	80 00	....
Chas. A. Wieting	Commissioner	August	2	333 33	....
Geo. B. Fellows	Agent		2	75 00	....
V. P. D. Lee	do		2	125 00	....
John M. Hutchings	do		2	75 00	....
C. H. Allen	do		3	60 00	50 20
Chas. Burke	do		3	75 00	25 35
Geo. B. Fellows	do		3	....	8 48
V. P. D. Lee	do		3	....	2 48
Wm. B. Mynderse	do		3	60 00	32 88
Simon Nussbaum	do		3	75 00	....
Stillwell & Gladding	Chemists		3	17 50	1 10
E. J. Wheeler	do		3	166 66	15 02
J. C. Willson	do		3	50 00	....
W. E. Walker	Laborer		3	40 00	....
E. F. Burke	Agent		3	75 00	32 44
C. A. Wieting	Commissioner		7	....	38 91
Geo. L. Flanders	Assistant commissioner		7	....	*415 50
Geo. L. Flanders	do		13	208 33	....
A. L. Haines	Agent		13	75 00	61 30
Henry S. Ambler	Assistant commissioner		23	208 33	81 21
V. C. Beebe	do		23	125 00	56 64
J. P. Clark	do		23	125 00	59 64
Wm. T. Hughes	do		23	125 00	27 50
F. H. Kracke	do		23	208 33	70 05
T. Jas. Owens	do		23	125 00	19 40
C. R. Payne	do		23	125 00	54 33
S. B. Richardson	do		23	125 00	37 29
A. L. Twitchell	do		23	125 00	60 13

*Hotels and fares, $38.04; postage, stationery, printing, etc., $377.46.

DETAILED STATEMENT, ETC.— (*Continued*).

NAME.	Position held.	Date.		Services.	Expenses.
		1897.			
Geo. D. Babcock	Agent	August	23	$75 00	$61 76
W. J. Bennett	do		23	75 00	73 20
Geo. Bernhard	do		23	75 00	86 54
Arch D. Clark	do		23	80 00	52 97
John J. Coughlin	do		23	75 00	24 87
W. J. Corbett	do		23	60 00	77 18
M. Dugan	do		23	75 00	82 32
John R. Earl	do		23	75 00	20 02
J. M. Esmay	do		23	75 00	67 88
M. Galligan	do		23	75 00	10 95
C. S. Kellogg	do		23	75 00	89 63
Robt. McAdam, Jr.	do		23	75 00	68 01
John McGuire	do		23	80 00	41 78
M. T. Morgan	do		23	100 00	116 73
C. J. Morganstern	do		23	75 00	36 14
Chas. F. Nash	do		23	75 00	58 67
John T. Norton	do		23	80 00	48 95
R. H. Palmer	do		23	75 00	60 46
J. M. Quigley	do		23	75 00	56 39
W. B. Reading	do		23	75 00	24 11
H. A. Rees	do		23	100 00	78 75
Chas. Sears	do		23	80 00	61 03
Nicholas Van Horne	do		23	75 00	61 21
C. B. Wakefield	do		23	60 00	80 10
C. A. Warren	do		23	60 00	23 38

Theo. J. Bradley	Chemist		23	57 00	....
Jos. F. Geisler	do		23	135 75	7 62
S. A. Lattimore	do		23	62 50	....
E. G. Love	do		23	53 50	50
John A. Miller	do		23	100 00	....
Stillwell & Gladding	do		23	12 50	90
Hugh C. Troy	do		23	75 00	30
Chas. H Cook	Veterinarian		23	5 00	....
Wm. H. Kelly	do		23	40 00	33 72
W. J. Wadsworth	do		23	35 00	23 34
New York Stencil Works	Cheese brands		23	....	35 00
Chas. A. Wieting	Commissioner	September	1	332 33	....
Geo. B. Fellows	Agent		1	75 00	....
V. P. D. Lee	do		1	125 00	....
John M. Hutchings	do		1	75 00	....
Chas. A. Wieting	Commissioner		2	....	47 28
E. F. Burke	Agent		2	75 00	57 66
Chas. Burke	do		2	75 00	37 88
Geo. B. Fellows	do		2	....	10 06
John M. Hutchings	do		2	....	17 26
Wm. B. Mynderse	do		2	60 00	32 42
Simon Nussbaum	do		2	75 00	....
J. C. Willson	Chemist		2	50 00	....
W. E. Walker	Laborer		2	40 00	....
A. L. Haines	Agent		2	75 00	25 12
Geo. L. Flanders	Assistant commissioner		8	....	*505 15
Wm. T. Hughes	do		9	125 00	26 63
F. H. Kracke	do		9	208 33	47 95
C. R. Payne	do		9	125 00	53 38
S. B. Richardson	do		9	125 00	61 07
A. L. Twitchell	do		9	125 00	65 87

*Hotels and fares, $57.65; postage, stationery, printing, etc., $447.50.

DETAILED STATEMENT, ETC.— (*Concluded*).

NAME.	Position held.	Date.	Services.	Expenses.
		1897.		
C. H. Allen	Agent	September 9	$60 00	$48 64
Geo. Bernhard	do	9	75 00	87 09
Arch D. Clark	do	9	80 00	53 67
John J. Coughlin	do	9	75 00	15 50
John R. Earl	do	9	75 00	20 24
M. Galligan	do	9	75 00	10 10
Jas. E. Langdon	do	9	21 29	15 14
John McGuire	do	9	80 00	64 00
M. T. Morgan	do	9	100 00	76 35
John T. Norton	do	9	80 00	49 80
J. M. Quigley	do	9	75 00	48 03
Wm. B. Reading	do	9	75 00	30 05
Chas. Sears	do	9	80 00	68 78
C. J. Standart	do	9	5 00	1 15
C. A. Warren	do	9	60 00	27 10
E. S. Wilson	do	9	72 00	31 83
John A. Miller	Chemist	9	100 00	1 00
Hugh C. Troy	do	9	75 00	6 58
Chas. H. Cook	Veterinarian	9	10 00	....
Helen F. Rossman	Stenographer	9	12 90	....
V. C. Beebe	Assistant commissioner	20	125 00	62 47
J. P. Clark	do	20	125 00	79 74
T. Jas. Owens	do	20	125 00	33 20
Geo. D. Babcock	Agent	20	75 00	66 83
A. M. Kibbe	do	20	60 00	65 61

John E. Kruse	do	20	60 00	59 43
W. J. Corbett	do	20	60 00	35 05
Robt. McAdam, Jr.	do	20	75 00	80 09
C. J. Morganstern	do	20	75 00	51 47
Chas. F. Nash	do	20	75 00	72 40
W. C. Patrick	do	20	60 00	85 52
Chas. T. Russell	do	20	60 00	66 82
Nicholas Van Horne	do	20	75 00	71 17
C. B. Wakefield	do	20	60 00	85 18
Theo. J. Bradley	Chemist	20	78 00	....
Jos. F. Geisler	do	20	246 62	5 78
S. A. Lattimore	do	20	5 00	....
E. G. Love	do	20	118 25	2 50
Wm. M. Smith	do	20	10 00	68
F. P. Vandenburgh	do	20	50 00	68
E. J. Wheeler	do	20	166 66	....
John Evans	Clerk	20	15 17	....
J. M. Esmay	Agent	20	75 00	73 28
Henry S. Ambler	Assistant commissioner	27	208 33	80 25
W. J. Bennett	Agent	27	75 00	84 73
M. Dugan	do	27	75 00	74 85
C. S. Kellogg	do	27	75 00	94 82
R. R. Kirkland	do	27	60 00	97 79
R. H. Palmer	do	27	60 00	30 80
H. A. Rees	do	27	100 00	71 86
Chas. A. Wieting	Commissioner	28	333 34	....
Geo. L Flanders	Assistant commissioner	28	208 34	....
Geo. B. Fellows	Agent	28	75 00	....
V. P. D. Lee	do	28	125 00	....
J. M. Hutchings	do	28	75 00	....

AGRICULTURAL SOCIETIES.

The appropriations made by the Legislature for the promotion of agriculture, to be distributed to agricultural societies, were $136,000. The acts appropriating these moneys, and amounts appropriated thereby, were as follows: Chapter 948 of the Laws of 1895, $76,000; Chapter 589 of the Laws of 1896, $50,000, this money being derived from the provisions of Chapter 479 of the Laws of 1887, as amended by Chapter 197 of the Laws of 1894, and Chapter 570 of the Laws of 1895, and Chapter 790 of the Laws of 1897, $10,000; also, $679.25, a balance remaining in the State treasury from former appropriations not apportioned, making a total sum of $136,679.25.

The amounts received by the agricultural societies in the State entitled to the above-named moneys were as follows:

New York State Agricultural Society	$22,000 00
Western New York Agricultural Society	2,000 00
Orange County Agricultural Society	2,000 00
Hornellsville Farmers' Club	2,000 00
Cambridge Valley Agricultural Society and Stock Breeders' Association	2,000 00
Westchester County Agricultural Society	2,000 00
Albany County Agricultural Society and Exposition	1,535 89
Allegany County Agricultural Society	946 23
Broome County Agricultural Society	1,363 71
Cattaraugus County Agricultural Society	1,014 94
Chemung County Agricultural Society	1,405 22
Chenango County Agricultural Society	1,123 82
Clinton County Agricultural Society	1,727 32
Columbia County Agricultural Society	1,618 32
Cortland County Agricultural Society	1,239 90
Delaware County Agricultural Society	1,276 79
Dutchess County Agricultural Society	2,895 55
Erie County Agricultural Society	1,740 00
Essex County Agricultural Society	1,015 45
Franklin County Agricultural Society	1,545 81
Fulton County Agricultural Society	1,977 15

Genesee County Agricultural Society	$1,417 06
Greene County Agricultural Society	1,147 65
Herkimer County Agricultural Society	1,135 95
Jefferson County Agricultural Society	1,969 08
Lewis County Agricultural Society	1,290 85
Livingstone County Agricultural Society	1,135 11
Brookfield Agricultural Society	1,186 66
Montgomery County Agricultural Society	1,264 91
American Institute	1,795 97
Niagara County Agricultural Society	1,187 93
Oneida County Agricultural Society	1,681 94
Onondaga County Fair	1,718 34
Ontario County Agricultural Society	1,164 22
Orleans County Agricultural Society	1,567 11
Oswego County Agricultural Society	1,549 96
Otsego County Agricultural Society	1,534 82
Putnam County Agricultural Society	989 01
Queens County Agricultural Society	3,626 70
Agricultural and Liberal Arts Society of Rensselaer County	1,499 50
Rockland County Agricultural Society	981 67
St. Lawrence County Agricultural Society	1,529 23
Saratoga County Agricultural Society	1,556 76
Schoharie County Agricultural Society	1,438 54
Schuyler County Agricultural Society	1,061 52
Seneca County Agricultural Society	1,251 90
Steuben County Agricultural Society	1,913 81
Suffolk County Agricultural Society	1,583 55
Sullivan County Agricultural Society	1,328 96
Tioga County Agricultural Society	1,107 83
Tompkins County Agricultural Society	1,578 88
Ulster County Agricultural Society	1,202 45
Washington County Agricultural Society	2,458 80
Wayne County Agricultural Society	853 24
Wyoming County Agricultural Society	1,051 23
Yates County Agricultural Society	1,088 24

Cuba Fair Society	$932 54
Wellsville Fair Association	1,068 11
Binghamton Industrial Exposition	1,769 55
Franklinville Driving Park and Agricultural Society.	780 09
Afton Driving Park and Agricultural Society	1,049 07
Riverside Agricultural Society	1,188 98
Columbia Agricultural and Horticultural Association	1,112 02
Catskill Mountain Agricultural Society	830 86
Delaware Valley Agricultural Society	1,695 03
Cape Vincent Agricultural Society	679 24
Hemlock Lake Union Agricultural Society	753 78
Brockport Union Agricultural Society	1,307 63
Boonville Fair Association	841 87
Gorham Agricultural Society	674 45
Naples Union Agricultural Society	781 93
Sandy Creek, Richland, Orwell and Boylston Agricultural Society	1,228 75
Butternut Valley Agricultural Society	1,608 25
Oneonta Union Agricultural Society	1,363 52
Richfield Springs Agricultural Society	856 56
Schenevus Valley Agricultural Society	674 95
Rockland County Industrial Association	678 23
Racket Valley and St. Regis Valley Agricultural Society	1,410 14
Cobleskill Agricultural Society	1,478 18
Prattsburgh Union Agricultural Society	726 49
Southern Steuben Agricultural Society	750 84
Northern Tioga Agricultural Society	865 81
Dryden Agricultural Society	1,038 58
Union Agricultural and Horticultural Society	749 15
Palmyra Union Agricultural Society	1,053 09
Silver Lake Agricultural Society	737 45
Dundee Fair Association	718 63

This Department has, under the provisions of section 33 of the Agricultural Law, issued brands to the following factories of the State, namely:

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR ENDING SEPTEMBER 30, 1897, BY COUNTIES.

ALLEGANY COUNTY.

NAME OF FACTORY.	Applicant.	Post-office.
Alfred Centre	Samuel Cornelius	Alfred.
Allen	A. E. Perry	Belfast
Allentown	J. B. Howden	Allentown.
Andover	W. F. Snyder	Andover.
Angelica B. & C. Mfg. Co.	L. S. Hastings	Angelica.
Angelica Union	Chas. F. Potter	Angelica.
Barr	J. P. Barr	Friendship.
Beach Hill	R. C. Alsworth	Shongo.
Belfast	A. E. Perry	Belfast.
Bishopville	Geo. Cole	Bishopville.
Black Creek	M. J. Dunn	Black Creek.
Brookside	M. E. Gordon	Rushford.
Caneadea	Young & Young	Fillmore.
Canaseraga	Young & Young	Canaseraga.
Cold Spring	Geo. M. Grow	Alfred Station.
Crowner	Wm. Wahl	Elm Valley.
Cryder Creek	Hakes & Boyce	Wellsville.
East Grove	S. F. Bardwell	Whitney Point.
East Valley	S. G. Brown	Andover.
Elm Valley	U. W. Stratton	Elm Valley.
Empire	Henry E. Osgood	Galen.
Fillmore	Young & Young	Fillmore.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— ALLEGANY COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Fink Hollow	Young & Young	Allen.
Five Corners	E. P. Fenner	Alfred Station.
Ford's Brook	Gilbert McKinley	Standards.
Gilt Edge	J. C. Holden	Cuba.
Hall's	A. E. Hall	Scio.
Home	E. P. Fenner	Alfred Station.
Houghton	P. B. Loftis	Houghton.
Hume	Young & Young	Fillmore.
Independence	Alfred W. Stone	Independence.
Karr Valley	Walter McHenry	Almond.
Keystone	J. R. Lamont	Aristotle.
Knight's Creek	John L. Coyle	Scio.
Lafferty	Jas. Loftis	Cuba.
Little Genesee	C. A. Thompson	Little Genesee.
McHenry Valley	E. P. Fenner	Alfred Station.
Marshall	A. E. Perry	Belfast.
Mill's Mills	A. L. Boller	Hume.
Murray	Bernard Murray	Andover.
Oramel	A. E. Perry	Belfast.
Petrolia	W. A. Dodge	Petrolia.
Phillip's Creek	Ockerman & Co	Phillips Creek.
Pleasant Valley	E. P. Fenner	Alfred Station.
Pleasant Valley	L. F. Ingalls	Cuba.
Podonque	A. S. Olthof	Rushford.

Rice	J. P. Barr	Friendship.
Richburg	F. J. Brown	Richburg.
Rockville	A. E. Perry	Belfast.
Rush Creek	Young & Young	Fillmore.
Scio No. 1	Mrs. Harriet Bliven	Scio.
Shongo	Young & Young	Fillmore.
Shongo	R. C. Alsworth	Shongo.
Short Tract	Young & Young	Fillmore.
Slater Creek	Chas. Swain	Canaseraga.
South Andover	A. M. Mingus	Andover.
South Bolivar	B. F. Maynard	South Bolivar.
South Cuba	G. S. Marsh	Cuba.
Spring Brook	M. J. Dunn	Black Creek.
Spring Mills	C. L. Richardson	Spring Mills.
Stone Springs	Young & Young	Fillmore.
Transit Bridge	A. E. Perry	Belfast.
Trapping Brook	Mary J. Mead	Wellsville.
Turnpike	J. C. Vincent	Almond.
Union	Young & Young	Fillmore.
Vandemark No. 1	G. E. Dodge	Scio.
Vandemark No. 2	G. E. Dodge	Scio.
West Almond	Alfred Fletcher	West Almond.
West Branch	Kendall & James	Rushford.
West Burns	W. E. Childs	Whitney Crossing.
West Hill	James McMurty	Caneadea.
White Creek	W. E. Wilkinson	Belfast.
Wildman	C. H. Austin	Whitesville.
Wiscoy	Young & Young	Fillmore.
Withey	W. J. Guill	Withey.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— BROOME COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office
Barker	Emmerson Smith	Itaska.
Conklin Milk Product Co	Jas. Kane	Conklin.
Hurd	Frank Delong	Colesville.
Killowog	G. A. Dwight	Killawog.
Locust Brow	J. W. Merchant	Whitney Point.
North Fenton	C. H. Paddleford	North Fenton.
North Sanford	E. W. Bilby	North Sanford.
West Windsor	Dewitt Hall	West Windsor.
Windsor	Empire State Dairy Co	Brooklyn.
Whitney's Point	Jas. Lammle	New York city.
	CATTARAUGUS COUNTY.	
Abbotts Union	Thos. L. McVey	Abbotts.
Ashford	J. R. Zetwick	Ashford.
Barber	W. H. Klens	Otto.
Bellows	A. B. Neff	Ashford.
Bigelow	J. W. Clair	Springville.
Block	E. L. Jones	Delevan.
Block	J. W. Clair & Co	Springville.
Broadway	S. D. Vance	East Concord.
Brown Meadows	J. W. Clair & Co	Springville.
California Hill	J. W. Clair	Little Valley.
Canada	J. W. Clair & Co	Springville.
Canada Hill	A. B. Neff	Ashford.
Cold Spring	D. H. Thompson	Randolph.

Columbia	New York Milk Produce Co	New York city.
Cottage	John Olivey	Cottage.
Demmons	J. W. Clair	Springville.
Derby, C. E	C. E. Derby	Otto.
Double Mill Hill	E D. Morey	Elkdale.
Eagle	Ahrens & Zetwick	East Otto.
East Leon	A. Howard	Wesley.
East Machias No. 1	S. P. Wright	Machias.
East Otto	Ahrens & Zetwick	East Otto.
East Valley	Gust Wulf	Ellicottville.
Elkdale	E. D. Morey	Elkdale.
Elko	J. H. Potter	Tunessassa.
Ellington Comb. No. 7	E. F. Rowley	Kennedy.
Ellicottville	E. C. Alsworth	Ellicottville.
Elm Brook No. 1	Henry Jenkel	East Leon.
Elm Brook No. 3	Henry Jenkel	East Leon.
Elm Creek	D. A. Cowan	East Randolph.
Fairview	D. L. Hooper	Fairview.
Fay Hollow	M. N. Costello	Hinsdale.
Five Mile Union	E. D. Bennett	Allegany.
Five Points	J. W. Clair & Co	Little Valley.
Fox	J. W. Clair & Co	Springville.
Franklinville Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	E. H. Farrington	Franklinville.
Franktown	A. B. Neff	Ashford.
Freedom	S. J. Owens	Freedom.
Frye	J. W. Clair	Springville.
Gampp No. 1	J. Gampp & Sons	Randolph.
Genesee Valley	B. D. Willard	East Randolph.
Glen Brook	John F. Jenkel	Ellicottville.
Grand Central	E. E. McNall	Franklinville.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— CATTARAUGUS COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Granger Hall	D. H. Thompson	Randolph.
Green Mountain	Will Wulff	Plato.
Highland	W. A. Hopkins	Conewango.
Hilltop Farm	E. T. Ryder	Gowanda.
Holmes	F. W. Holmes	East Otto.
Home	Jas. N. Brown	Cuba.
Humphrey, L. B	L. B. Humphrey	Portville.
Ischua No. 2	Edwin S. Moses	Ischua.
Lime Brook No. 1	P. F. Jark	Otto.
Lime Brook No. 2	P. F. Jark	Otto.
Lime Brook No. 4	P. F. Jark	Otto.
Linwood	D. H. Thompson	Randolph.
Little Valley	J. W. Clair & Co.	Little Valley.
Lower Haskell	Jas. J. Kirby	Olean.
Mansfield	P. F. Jark	Otto.
Maple Grove	Geo. W. Haskell	Sandusky.
Maynard	Ahrens & Zetwick	East Otto.
Napier	C. E. Napier	Franklinville.
Nine Mile Union	Michael Zister	Allegany.
North Leon	J. Dorsey	Wesley.
Otto Crescent	E. T. Ryder	Gowanda.
Plato	John H. Wulff	Plato.
Pullman	J. W. Clair & Co.	Little Valley.
Randall	J. W. Clair & Co.	Little Valley.

Randolph	W. Carpenter & Sons	East Randolph.
Randolph No. 2	W. Carpenter & Sons	East Randolph.
Randolph No. 3	W. Carpenter & Sons	East Randolph.
Randolph No. 4	W. Carpenter & Sons	East Randolph.
Randolph No. 5	W. Carpenter & Sons	East Randolph.
Red House	Mrs. H. J. Marsh	Red House.
Riceville	A. B. Neff	Ashford.
Rockspring No. 1	E. H. Farrington	Franklinville.
Sandusky Nos. 1, 2, 3, 5, 9, 12	J. B. Lewis	Sandusky.
Schwertze	A. B. Neff	Ashford.
Scott's Corners	W. L. Hogg	Hinsdale.
Sibley	J. W. Clair & Co	Little Valley.
South Napoli	J. W. Clair & Co	Little Valley.
Spring Brook Nos. 1, 2, 3, 4	C. J. Busekist	New Albion.
Spring Valley	W. T. Peaslee & Son	East Randolph.
Star	Fred A. Williams	Franklinville.
Stone	S. M. Fisher	Elgin.
Union	Ahrens & Zetwick	East Otto.
Van Brunt	A. Van Brunt	Carroll.
Vedder's Corners	J. M. Zeilman	Plato.
Vinton	E. C. Alsworth	Ellicottville.
Wesley	A. Howard	Wesley.
West Branch Union	L. W. Howden	Allegany.
West Farmersville	S. A. Peavy	Great Valley.
West Machias	J. W. Clair & Co	Springville.
West Valley	J. W. Clair & Co	Springville.
Wilber's	H. M. Wilber	Allegany.
Wilber's Allegany	H. M. Wilber	Allegany.
Yorkshire Centre	E. E. Reese	Delevan.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— CAYUGA COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Cato	W. E. Cusack	Jordon.
Como	Chas. F. Davenport	Como.
Moravia	H. E. Slone	Kelloggsville.
Slone	H. E. Slone	Kelloggsville.
Sterling	S. H. & A. M. Oliver	Sterling.
	CHAUTAUQUA COUNTY.	
Abbey	E. L. Lewis	Hamlet.
Alden	A. D. Alden	Sinclairville.
Arkwright Union	Frank O. Briggs	Fredonia.
Bemus Point	Frank J. Wheeler	Bemus Point
Blockville	G. H. Burlage	Blockville.
Charlotte Centre	W. R. Tarbox	Charlotte Centre.
Charlotte Union Co	E. F. Lake	Charlotte Centre.
Chautauqua	Chautauqua Cheese Co	Sherman.
Cold Spring	C. C. Tyron	South Ripley.
Cold Spring	G. W. Russell & Ames	Hartfield.
Ellington Comb. Nos. 1, 2, 3, 4, 5, 6, 8	E. F. Rowley	Ellington.
Empire	Wm. Rockwell	Forestville.
Forestville	L. Stanley	Forestville.
Goshen	J. J. Colwell	Bear Lake, Pa.
Grant	F. W. Engle	Broken Straw.
Hamlet	Delos Tanner	Hamlet.
Hubbard	F. W. Edmunds	Sherman.
Laona	S. G. Bartlett	Laona.

Moon's	Mallory & Thompson	Moons.
Nashville	C. Montgomery	Nashville.
Red Bird	A. D. Alden	Sinclairville.
Rood	Reed & Rood	Sinclairville.
Sherman	F. W. Edmunds	Sherman.
Sinclairville.	D. H. Thompson	Randolph.
Star	Marcus Pelton	Gerry.
Villenova.	H. S. Sweetland	Villenova.
Warner	Chas. E. Denison	Sinclairville.
Watt's Flats	W. P. Saxton	Watts Flats.
West Ellery	Frank W. Stowell	Bemus Point.
White.	Fred L. White	Marvin.

CHEMUNG COUNTY.

Big Flats	N. S. Knapp	Chester.
Oak Grove	B. Moss	Horseheads.

CHENANGO COUNTY.

Amblerville	Empire Cheese Co.	New Berlin.
Beaver Meadow	E. F. Smith	So. Plymouth.
Bobel	J. V. Elmer	Greene.
Cold Water	H. J. Kroos	New York city.
Cottage	Wm. Casey	Sherburne.
Cowles	Geo. D. Cowles	Greene.
Davis, G. W.	C. H. Davis	Pharsalia.
Deer Spring	G. C. Stiles	Tyner.
Elm Shade	R. B. Wightman	So. New Berlin.
Empire	B. E. Holcomb	Oxford..
Excelsior	D. M. Heady	Preston
Excelsior	C. H. Southard	E. McDonough.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— CHENANGO COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Gold Leaf	S. L. Fletcher	Coventry.
Harbor	H. C. Brockway	Richfield.
Harrisville	A. H. Dart	Sherburne.
Hillside Creamery	A. T. Gahan	Sherburne.
Johnson, E. M.	E. M. Johnson	Afton.
Lincklaen Centre	Alex. Harris	Lincklaen.
Loomis	Wm. E. Stryker	Poolville.
McDonough	C. H. Southard	East McDonough.
Marcy	L. A. Gross	Greene.
Mariposa	Curtis Kenyon	South Otselic.
Mill Brook	C. H. Southard	East McDonough.
Mount Upton	Empire State Dairy Co	Brooklyn.
North Guilford	J. E. Japhet	Guilford
North Pitcher	Frank Coates	North Pitcher.
Pagebrook	B. T. Osborne	Greene.
Preston	C. H. Southard	East McDonough.
Reynolds	W. S. Reynolds	Smyrna.
Rock Spring	F. H. Wilcox	Columbus.
Silver Spring	G. G. Robinson	Sherburne.
Smith	Levern Smith	Guilford.
Smithville Centre	C. H. Southard	East McDonough.
South New Berlin	H. S. Pound	Middletown.
South Otselic	H. C. Dutton	South Otselic.
Todd	S. W. Howard	Sherburne.
Wheeler	F. M. Hills	Pitcher Springs.
Wood's Corners	O. A. Weatherly	Norwich.

CORTLAND COUNTY.

Bear Spring	A. C. Clark	Solon.
Belknap	Geo. Salisbury	Willett.
Blodgett Mills Union	W. A. Spencer	Blodgett Mills.
Carson	C. E. Carson	Virgil.
Cortland County Central	Geo. S. Davis	McGrawville.
Cortland Dairy Co	G. H. Smith	Cortland.
Crystal Spring	W. J. Bingham	McGrawville.
Cuyler Milk Station	B. M. Hallock	Cuyler.
De Ruyter	Wm. D. Marble	De Ruyter.
East Freetown	L. H. Mathews	East Freetown.
East Homer	R. Hibbard	East Homer.
East Side	E. C. Rindge	Cortland.
Holenbeck	S. Holenbeck	Texas Valley.
Homer West Hill	J. S. McMaster	Homer.
Horford Mills	A. Tarbox	Horford.
House	John C. House	Marathon.
Kesler's	C. Kesler	Marathon.
Maple Grove	Geo. E. Dodd	McGrawville.
North Solon	C. W. Ellis	McGrawville.
Otselic Valley	C. A. Rooks	Upper Lisle.
Patrick's	J W. Patrick	Cuyler.
Preble	John Bosch & Son	Brooklyn.
Scott	H. E. J. Potter	Scott.
Sears	Frank H. Sears	Cortland.
Taylor	Isaiah Baldwin	Taylor.
Truxton Dairymens' Union	P. D. Muller	Truxton.
Virgil Spring	D. E. Stillman	Virgil.
Whitmarsh	F. C. Whitmarsh	Cuyler.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— DELAWARE COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post office.
Arctic	Wm. Stringer	Treadwell.
Cold Spring	Wm. Stringer	Treadwell.
Davenport	O. Coss	Davenport.
Delhi	P. E. Sanford	Warwick.
Mills Creamery	W. M. Mills	North Franklin.
Sidney Centre	Root & Manger	Gilbertsville.
Youngs	J. C. Rider & Co	Youngs.
	ERIE COUNTY.	
Clear Creek Nos. 1 and 2	J. C. Brigham	Collins Center.
Cloverland	J. S. Simmons	Sardinia.
Collins Centre	S. D. Vance	East Concord.
Dye	J. W. Clair	Springville.
East Branch	S. D. Vance	East Concord.
Glenwood	S. D. Vance	East Concord.
Gowanda	S. D Vance	East Concord.
Henshaw	J. W. Clair & Co.	Springville.
Langford	S. D. Vance	East Concord.
Lawton's	S. D. Vance	East Concord.
Prairie Queen	I. A. M. Skuse	Collins Center.
Rider	J. W. Clair & Co.	Springville.
Schrable	S. D. Vance	East Concord.
South Branch	S. D. Vance	East Concord.
Springville	J. W. Clair	Springville.

Tabor	S. D. Vance	East Concord.
Townsend Hill	J. W. Clair & Co	Springville.
West Cancord	S. D. Vance	East Concord.
Woodside Nos. 1 and 2	T. E. Moore	Mortons Corners.
Wyandale	S D. Vance	East Concord.
Zoar	E. T. Ryder	Gowanda.

FULTON COUNTY.

Cross Board	Elmer J. Dorn	Johnstown.
Garoga	Hiram P. Rouse	Garoga.
Willow Creek	Albert N. Getman	Ephratah.
Zimmerman Creek	Eugene Failing	St. Johnsville.

HERKIMER COUNTY.

Arnold	J. H. Ives	Little Falls.
Bastow Hill	Jas. W. Ford	Fairfield.
B. H	J. A. Irwin	Edicks.
Bullock	M. H. Bullock	Beaver.
Carpenter	E. L. Carpenter	Salisbury.
Cedarville	Grant Hollenbeck	Russia.
Cloverdale	J. H. Ives	Little Falls.
Cloverleaf	J. H. Ives	Little Falls.
Cold Spring	Grant Hollenbeck	Cedarville.
Cook, Ives & Co	A. Lambert	Cedarville.
Cramer, E	E. Cramer	Salisbury.
Crystal Spring	C. Cagwin	Newville.
Davis	E. H. Davis	West Winfield.
Dorz	C. H. & I. Quackenbush	Ohio.
Eatonville	T. H. Dapson	Little Falls.
Elizabethtown	A. E. DeGarmo	Ilion.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— HERKIMER COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Fairfield Association	T. Atkins	Little Falls.
Farm Dairy	Wm. Strobel	Cold Brook.
Fink's Basin	D. H. Burrell	Little Falls.
Frankfort	M. K. Ellsworth	West Monroe.
Fulmer Creek	A. R. Petrie	Mohawk.
Gilt Edge	Emory C. Hall	Frankfort.
Gray	A. E. Snyder	Gray.
Griswold Farm	John Carney	Middleville.
Herkimer	Wm. Kruger	Herkimer.
Hillside	D. D. Crim	Paines Hollow.
Hinckley, G	E. H. Hughes	Gravesville.
Jones, E. E	E E. Jones	Frankfort.
Jordanville	T. C. Swift	Jordanville.
Kast Bridge	Alvin Countryman	Herkimer.
Keller, A	Willard Keller	Little Falls.
King	J. H. Ives	Little Falls.
King's, A. S	A. S. King	Norwich Corners.
La Rue	L. A. La Rue	Little Falls.
McArthur, D	D. McArthur	Grant.
McNierny	Jos. McNierny	Newport.
Manheim Turnpike	W. O. Perkins	Little Falls.
Mather	D. S. Willoughby	Fairfield.
Middleville	A. W. Ford	Middleville.
Miller Mills	Leland J. Miller	Miller Mills
Mohawk Valley	Seaman Garline	Little Falls.

Morts	M. C. Morts	Mohawk.
Murphy, J. E	J. E. Murphy	Norway.
Nellis	H. E. Nellis	Herkimer.
Newport Hill	W. A. Brayton	Poland.
Newark M. & C. Co	C. E. Histed	South Columbia.
North Litchfield	H. H. Davis	North Litchfield.
North Winfield No. 1	C. T. Wheelock	North Winfield.
Northwood	J. L. Carver	Cedar Lake.
Norway	H. C. Nichols	Norway.
Norway Association	F. F. Turck	Newport.
Old Fairfield	I. S. Weller	Fairfield.
Old Manheim	Jos. Rice	Little Falls.
Old Salisbury	Jephthah Hand	Salisbury.
Paine's Hollow	Geo. H. Van Slyke	Edicks.
Peck, Wm	G. F. Girven	Little Falls.
Poland	J. B. Read	Poland.
Private Dairy	Mrs. Amelia Hagadorn	Ohio.
Quinlaven	T. B. Quinlaven	Litchfield.
R. & B	C. W. Ransom	Little Falls.
R. & C	A. H. Rasbach	Herkimer.
Read, G. D	G. D. Read	Cold Brook.
Sand Hill	Geo. L. Wood	Herkimer.
Shell's Bush	M. Rasback	Little Falls.
Sherman	Ernest Sherman	Newport.
Small Farm Dairy	Wm. Fields	Cold Brook.
Small's Bush	Adam Casler	Little Falls.
Snell's Bush	Jacob Zoller	Little Falls.
Star	David Gordon	Middleville.
Staring	Gilbert Staring	Deck.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— HERKIMER COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Sweet Clover	M. P. Stringer	Russia.
West Canada Creek	Sam. Baird	Poland.
Whipple	B. A. Whipple	Van Hornesville.
1742	G. E. Curtis	Ohio.
	JEFFERSON COUNTY.	
Adams	H. J. Allen	Adams.
Ball, Henry	Henry Ball	Watertown.
Barott	H. H. Barott	Mannsville.
Belleville	Overton & Co	Belleville.
Bridge	W. O. Newton	Adams.
Brookside	Flanders, Smith & Freeman	Watertown.
Brownville	C. C. Shipman	E. Houndsfield.
Central	J. A. Shaver	Wilna Centre.
Chaumont	Chaumont Dairying Co	Chaumont.
Cloverdale	Keyes & Helmer	Philadelphia.
Cold Spring	C. A. Overacker	Redwood.
Devoirs Corners	J. E. Fulton	Carthage.
Drill Well	C. W. Cheney	Sterlingville.
Empire State	R. P. Grant	Clayton.
Fair View	E. C. Wagoner	Watertown.
Farmers	R. P. Grant	Clayton.
Fillmore Bros	H. H. & M. M. Fillmore	Woodville.
French Cheese	F. X. Baumert & Co	Antwerp.
Front	Talcott, Parker & Kettle	Adams Centre.

Gould	Isaac H. Phillips	Evans Mills.
Grindstone	R. P. Grant	Clayton.
Line Road	R. P. Grant	Clayton.
Lorraine Village	M. H. Fox	Lorraine.
Maple Grove	A. M. Brown	Lorraine.
Mather Bros	S Mather	Belleville.
North Adams	E. D. Holloway	Adams Centre.
O. K.	F. A. Knapp	Great Bend.
Ontario	W. A. Walsworth	Sacketts Harbor.
Orleans Centre	H. F. Wetterham	La Fargeville.
Orleans Valley	R. P. Grant	Clayton.
Pamelia Centre	Levi Phillips	Watertown.
Parkinson Bros	P. C. Parkinson	Watertown.
Pierrepont Manor	Oren W. Graves	Pierrepont Manor.
Pitkin	L. S. Pitkin	Lorraine.
Pleasant Valley	C. E. Wiggins	Cape Vincent.
Point Vivian	R. J. Northup	Alexandria Bay.
Rayhill	Frank Rayhill	Henderson.
River Side	J. P. Carpenter & Son	Ox Bow.
Rodman Village	M. G. Wilson	Rodman.
Rosiere No. 1	Rosiere Cheese Co	Rosiere.
Scotch Brook	C. C. Cooke	Cape Vincent.
South Champion	Chas. S. Shedd	South Champion.
Spring	Irving G. Smith	Philadelphia.
Spring Brook	D. C. Chaumont	Natural Bridge.
Spring Valley	W. S. Kyes	Ox Bow.
Stone, E. L. No. 1	E. L. Stone	Mannsville.
Stone Mills Union	F. D. Gurnee	Stone Mills.
Sunny Side	L. A. & A. E. Helmer	Evans Mills.
Thistle	R. R. Kirkland	Redwood.
Warren Settlement	Louis Cornaise	Rosiere

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— JEFFERSON COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post office.
Wilson	E. Wilson	Philadelphia.
Wind Mill	C. C. Shipman	E. Houndsfield.
Winona	Chas. Anthony	Winona.
Thousand Island	R. P. Grant	Clayton.
	LEWIS COUNTY.	
Alger	George S. Alger	Martinsburgh.
Beach Hill	Albert Merz	New Bremen.
Black River Valley	W. E. Gaynor	E. Martinsburgh.
Brookside	Fred Burnes	Boyd.
Carpenter	J. H. Carpenter	Turin.
Cedar Spring	John L. Beach	Watson.
Champion Spring	C. Hirschey	Beaver Falls.
Cloverdale	Alfred Blum	Leyden.
Clover Valley	A. Essington	Carthage.
Clover Valley	W. S. Benton	New Bremen.
Cold Spring	C. E. Merz	Croghan.
Collinsville	H. J. Roberts	Collinsville.
Copenhagen	Cook & Otis	Denmark.
Croniser, Chas	Chas. Croniser	Florence.
Crown Brand	A. & H. E. Cook	Denmark.
Eagle	E. G. Graves	Lowville.
Erie	Emory Draper	Harrisville.
Farmers' Choice	W. S. Benton	New Bremen.
Fish Creek	H. G. Deis	Constableville.

Gardners Corners	C. F. Niebergall	Gardners Corners.
Glendale	Rudolf Regez	Glendale.
Gowdy	F. C. Gowdy	Martinsburgh.
Harters	P. A. Harter	Copenhagen.
High Mark	W. H. Fitch	Lowville.
Highmarket	Eugene Case	Highmarket.
Hillside	L. J. Benton	Martinsburgh.
Imperial	W W. Vorce	Copenhagen.
Independence	Lyman Burdick	Glendale.
Katsmayer	A. Katsmayer	West Leyden.
Lanpher	H. B. Lanpher	Copenhagen.
Legal Tender	J. E. McGrath	Turin.
Lowville	J. A. Merz	Lowville.
Malcom	D. Karlen	Boonville.
Maple Ridge	Mrs. F. C. Mahoney	Martinsburgh.
Meadow Brook	U. Fitch	Pasadena.
Miller	Michael Heiley	Constableville.
Mohawk Hill	George P. Mellon	Constableville.
Mud Lake	Berton Case	West Leyden.
New Columbia	George F. Butts	Harrisburgh.
Pinckney Corners	J. E. Schramp	Pinckney Corners.
Renaux	A. W. Renaux	Croghan.
Rising Star	Cook & Otis	Denmark.
Rising Sun	L. I. Raynor	Copenhagen.
River St	G. H. Monroe	Copenhagen.
Sharp	Wm. C. Spencer	Lowville.
Sins & Bierlie	Jos. Sins	West Leyden.
Spring Brook	M. L. Hoffman	Lyon Falls.
Staring	Willard Higby	Houseville.
Star Spring	S. L. Hirschey	Castorland.
Sulphur Springs	J. Searl	Lowville.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— LEWIS COUNTY — (*Continued*).

NAME OF FACTORY.	Application.	Post-office.
Union	J. C. Hardy	Copenhagen.
Valley	Fred Regez	Glendale.
Valley Dale	Mrs. W. A. Wheeler	Bellwood.
Valley Spring	Fred H. Loucks	Lowville.
Welch Hill	E. H. Evans	Turin.
West Harrisburgh	Mrs. W. A. Wheeler	Bellwood.
West Leyden	M. J. McGrath	West Leyden.
Williams No. 3	Loren D. Fox	Barnes Corners.
	LIVINGSTON COUNTY.	
Hunt's	Young & Young	Fillmore.
Keshequa	Mrs. Sarah Wheeler	Dalton.
Nunda	Young & Young	Nunda.
Tuscarora	Young & Young	Mt. Morris.
	MADISON COUNTY.	
Beaver Creek	Wm. H. Clark	Brookfield.
Bender	Fred Haas	Canastota.
Bradley Brook	D. E. Fairchild	Eaton.
Bridgeport	John Durst	Bridgeport.
Brown & Co	D. A. Hopkins	Georgetown.
Casler, M. D.	M. D. Casler	Bouckville.
Crystal Spring	O. J. Tucker	Clockville.
East Boston	Ellis D. Kuse	East Boston.
Erieville	C. E. Maynard	Erieville.

Excelsior	Geo. H. Denniss	Chittenango.
Hollenbeck	R. J. Hollenbeck	Peterboro.
Lakeport	L. W. Sayles	Bridgeport.
Lamb, E. D.	E. D. Lamb	Unadilla Forks.
Maple Grove	T. Prescott	Lakeport.
Milk Station	Steffens & Martens	Lebanon.
Morrisville	L. C. Smith	Morrisville.
No. 9	Wm. C. Sherman	Webster Station.
Oneida Valley	Wm. McAdam	Oneida Valley.
Paramount	J. P. Davis	Nelson.
Perryville Milk Association	Frank Cooper	Perryville.
Peterboro	R. J. Warcup	Peterboro.
Pleasant Valley	Levi Miller, Jr.	Peterboro.
Poolville	Wm. E. Stryker	Poolville.
Poolville Cem.	Empire State Dairy Co.	Brooklyn.
Quaker Basin	John Hunt	Deruyter.
Reservoir	S. D. Burdick	Webster Station.
Shed's	C. A. Buckingham	New Woodstock.
Solsville	A. D. Eames	Solsville.
South Hamilton	Wm. E. Stryker	Poolville.
Stevens	C. G. Stevens	Georgetown.
Temple	I. A. Wager	Brookfield.
Union	Milton H. Morgan	Brookfield.
Union	Geo. C. Dutton	Delphi.
West Hill	West Hill Cheese and Butter Co.	Chittenango.

MONROE COUNTY.

Mendon	M. M. Burt	Honeoye Falls.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— MONTGOMERY COUNTY —(*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Ames	M. M. Miller	Ames.
Bowman's Creek	Peter McEwan	Marshville.
Brookman's Corners	Wm. Dillenbeck	Fort Plain.
Christman, G. H.	G. H. Christman	St. Johnsville.
Dockstader, Wm.	Wm. Dockstader	Palatine Bridge.
Dunkel, A	G. Bushholtz	Fort Plain.
Elm Grove	Jacob Zoller	Little Falls.
Flat Creek	Jas. Weaver	Flat Creek.
Getman, C	C. Getman	Stone Arabia.
Maple Grove	F. H. Pruyn	Glen.
Minaville	Hiram Schuyler	Minaville.
Mohawk	Daniel Dockstader	Palatine Bridge.
Nellis, A.	J. C. Nellis	Palatine Bridge.
Palatine Union	R. G. Yost	Palatine.
Smith Creek	J. H. Smith	Fort Plain.
Tribes Hill	W. F. Getman	Tribes Hill.
Van Dusen	D. Van Deusen	Freys Bush.

ONEIDA COUNTY.

NAME OF FACTORY.	Applicant.	Post-office.
Augusta	P. P. Powers	Augusta.
Augusta Valley	J. W. Skerritt	Vernon Centre.
Blue Brook	Roscoe C. Coon	Ava.
Bridgewater	Z. Eldred	Bridgewater.
Brown	S. Koppler	West Branch.
Castle, G	Henry D. Morehouse	Ava.

Christien, A	C. A. Bartell	Florence.
Chrestien, F. N.	F. N. Chrestien	Camden.
Chrestien, F. N., No. 2	F. N. Chrestien	Camden.
Chrestien, F. N., No. 3	F. N. Chrestien	Camden.
Cold Spring	E. O. Jones	Remsen.
Cornish	J. D. Morris	Camden.
Deansville	J. H. Gazeley	Deansboro.
Delta	C. N. Bathrick	Delta.
Evans, Wm	Jacob Kallen	Rome.
Farmers	E. D. Franklin	North Western.
Fitch & Bacon	W. E. Golly	Verona.
Floyd Hill	Seward S. Mowers	East Floyd.
Franklin	A. J. Callahan	Franklin Iron Works.
F. T	Fred Teuscher	North Western.
Greggains, Wm	Wm. Greggains	Glenmore.
Hawkinsville	Chris Zushem	Hawkinsville.
Hayes	Wm. J. Hayes	Hawkinsville.
Hecla	F. A. Prescott	Hecla.
Jackson Valley	David Karlen	Boonville.
Katsmayer Branch	A. Katsmayer	West Leyden.
Kellogg	W. S. Jennings	Waterville.
Kent, B. H	P. O. Jones	East Steuben.
Ladd's, Dan	Dan Ladd	Canastota.
Lee Corners	Jas. Croniser	Stokes.
Lowell	F. J. Brill & Co	Lowell.
Marcy Centre	Geo. W. Wright	Marcy.
Merry, G	G. Merry	Verona.
Miller Branch	John Miller	Camden.
Mullin Bros	Jas. F. Mullin	Glenmore.
Mullin Hill	Robt. Roberts	Delta.
New London	J. J. Senn	New London.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— ONEIDA COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
North Bay	Jas. A. Krum	North Bay.
North Gage	P. Welch	North Gage.
North Steuben	N. H. Folts	North Steuben.
North Trenton	Everett C. Judson	Remsen.
North Western	D. B. Anderegg	North Western.
North Winfield No. 2	S. C. Wheelock	North Winfield.
Peoples	H. A. Johnson	Point Rock.
Porter	C. W. Porter	North Western.
Porter	D. Karlen	Boonville.
Quaker Hill	R. G. Jones	Glenmore.
Queen of Oneida	Albert Brown	Vienna.
Rathbunville	R. F. Ford	Verona Mills.
Remsen	Samuel Roberts	Remsen.
Reservoir	Bennie Coon	Sangerfield.
River Road	G. A. Griffin	Whitesboro.
Rock Spring	Henry A. Thomas	Ava.
Rome Association	G. N. Slone	Ridges Mills.
Rome Milk Station	E. E. McFarland	Rome.
Saulpaugh	Thomas Squires	Lee.
Sergeant, Melvin	Melvin Sergeant	Camden.
Shimble, C	Henry D. Morehouse	Ava.
Silver Spring	D. Karlen	Boonville.
South Western	C. D. Parsell	Big Brook.
Steuben Association	J. D. Merrick	Steuben.
Steuben Center	P. C. Mills	Steuben.

Stevens, E. L.	Henry D. Morehouse	Ava
Storey	Storey Bros	Westmoreland.
Taberg	Geo. J. Haas	Taberg.
Teal	J. L. Kingsbury	Clarks Mills.
Thomas, G. D	G. D. Thomas	Camroden.
Thomas, R. E	Jones & Hughes	Alder Creek.
Tuthill, D. H.	Camden Cheese Factory Association	Camden.
Union	A. W. Walker	Boonville.
Verona Central	Fred J. Merry	Verona Station.
Verona Landing	Geo. Breckenridge	Higginsville.
V. V	Ardie Hinckley	Vernon.
Waterbury	Jas. Kirkland	Florence.
West Ava	P. E. Adams	Ava.
West Camden	A. Cornish	Camden.
Westernville	John McCurn	Westernville.
Wittwer, S.	S. Wittwer	Colemans.

ONONDAGA COUNTY.

Apulia Creamery	G. H. Kreumeyer	Brooklyn.
Brewerton	W. F. Davey	Brewerton.
Cicero Center	O. J. Daniels	Cicero Center.
Delphi	Jas. F. Bulger	Delphi.
Fabius Creamery	Fabius Creamery Company	Fabius.
North Manlius	D. B. Overhiser	North Manlius.
Pleasant Hill	Newell Rowley	Fabius.
Pompey Center	Robt. Moore	Pompey Center.
Pompey Star	O. L. Robinson	Fabius.
Stone House	E. H. Rowley	Fabius.

List of State Cheese Brands Issued During the Year, Etc. — Ontario County — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Honeoye Valley	S. S. Williams	Honeoye.
Naples	J. W. Nellis	Naples.
	Orange County.	
Central Valley	Jas. C. Rider	Central Valley.
	Oswego County.	
Albion	S. D. Jackson	Altmar.
Banner	Salisbury & Peach	Pulaski.
Bowens Corners	W. H. Keller	Bowens Corners.
Bristol Hill	A. W. Clark	Volney.
Castor	Geo. L. Castor	Pulaski.
Central Square	H. E. Beeby	Central Square.
Cold Spring	G. G. Simmons	Redfield.
Colosse	R. H. Stevenson	Colosse.
Dewey	N. Kimball	Mexico.
Dugway	A. H. Turney	Dugway.
Eagle	A. H. Snell	Mexico.
East Boylston	Geo. D. Eggleston	Lorraine.
Empire	G. B. Cusack	Clifford.
Farmers	Walter Fravor	Mexico.
Finster, I. E.	Jas. A. Welch	Lacona.
Gilbertsville	C. H. Burlis	Gilbertsville.
Granby Centre	W. E. Cusack	Granby Centre.

Hannibal	C. E. Tucker	Hannibal.
Hastings	C. L. Jennings	Hastings.
Henderson	W. K. Haggerty	Altmar.
Hess	H. S. Casler	West Amboy.
Hinmansville	Edward J. Buckley	Hinmansville.
Howardville	C. P. Burch	Howardville.
Ingersoll	E. M. Ingersoll	Lacona.
Le Clair	F. P. Le Clair	Lacona.
Loomis, W. W.	W. W. Loomis	Ingalls Crossing.
McKinney, A. C	A. C. McKinney	Orwell.
Mayflower	H. E. Potter	West Monroe.
Mayflower.	Andrew Ott	Redfield.
Mill Brook	W. E. Hall	North Hannibal.
Molino	Ervin Snow	Orwell.
Mowry	Geo. L. Castor	Pulaski.
New Haven	Emile George	New Haven.
North Boylston	T. E. Wiltsie	North Boylston.
North Constantia	R. C. Stanton	North Constantia.
North Road	J. W. Dexter	Scriba.
North Scriba	J. F. Donelly	North Scriba.
Palermo	D. H. Trimble	Palermo.
Parish Center	Wm. F. Miller	Wrightson.
Peets Corners	A. Sauter	East Palermo.
Phoenix	Albert Merriam	Phoenix.
Porter	Geo. Porter	New Haven.
Pulaski	W. C. Holmes	Pulaski.
Ricard	D. E. West	Ricard.
Salisbury	Brayton Salisbury	Pulaski.
Salisbury No. 2	Brayton Salisbury	Pulaski.
Schoecraft	M. E. Shoecraft	Sandy Creek.
South Hannibal	G. D. Trimble	Palermo.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— OSWEGO COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
South Richland	J. J. Miller	Pulaski.
South Richfield No. 2	Geo. L. Castor	Pulaski.
Stevens, L. M	Allen M. Stevens	Orwell.
Stone Quarry	John Pifer	Arthur.
S. W. Oswego	F. A. Place	S. W. Oswego.
Vant	G. D. Trimble	Palermo.
Weeks, J. M.	J. M. Weeks	Prattham.
West Monroe Star	Will Mutter	West Monroe.
Wilcox	Milo Wikcox	Oswego Falls.
	OTSEGO COUNTY.	
Borston Corners	H. C. Brockway	Richfield.
Brighton	C. C. Brownrigg	Richfield Springs.
Brockway No. 1	H. C. Brockway	Richfield.
Burlington Flats	E. W. Wright	Burlington Flats.
Clarksville	Edgar Talbot	Middlefield.
Co-operative	F. W. Russell	New Lisbon.
Dimmock Hollow	C. P. Root	Gilbertsville.
East Springfield.	Chas. C. Brownrigg	East Springfield.
Edmeston	H. C. Brockway	Richfield.
Edmeston Dairy	G. E. Gardner	Edmeston.
Eldred, E	R. G. Peet	Mt. Vision.
Elms	O. F. Hawley	Morris.
Fall Brook	R. G. Peet	Mt. Vision.
Fay	John Mack	Richfield.

Gorman	August Aufmuth	Fly Creek.
Gilbertsville	John H. Gilbert	Gilbertsville.
Gregory	J. D. Rainey	Welcome.
Gregory, S. C	C. P. Root	Gilbertsville.
Harrison	J. H. Harrison	Cherry Valley.
Hartwick	A. W. Brumaghim	Otsdawa.
Hillington	Wm. Curtis	Gilbertsville.
Hinman Hollow	Jeremiah Fogarty	Milford.
Heldredge	R. G. Fuller	West Burlington.
Hubbell Hollow	F. P. Doran	Middlefield Centre.
Huntley	H. C. Brockway	Richfield.
Hyder	H. C. Brockway	Richfield.
Johnson, D. C	D. C. Johnson	Burlington Flats.
Kinney, J. P	Mrs. J. P. Kinney	Snowdon.
Laurens	C. P. Root	Gilbertsville.
Lena	E. R. Hunt	Lena.
Lentsville	W. L. Wicks	Lentsville.
Lloydsville	K. J. Wing	Unadilla.
Marcy, W. A	E. W. Wright	Burlington Flats.
Milford Centre	R. G. Peet	Mt. Vision.
Morris	E. R. Hunt	Morris.
Noblesville	C. P. Root	Gilbertsville.
Nos. 6, 7	H. C. Brockway	Richfield.
Oaksville	W. D. Bailey	Oaksville.
Oneonta Plains	Fred Taber	Oneonta.
Parks	G. C. Pashley	Burlington.
Patten	F. B. Rainey	Hartwick.
Pierstown Valley	M. H. Wadderspoon	Cooperstown.
Plainfield Union No. 1	D. D. Lamb	Plainfield Centre.
Plainfield Union No. 2	D. D. Lamb	Plainfield Centre.
Pleasant Valley	H. C. Brockway	Richfield.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.— OTSEGO COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Rider, J. J	J. J. Rider	Schuylers Lake.
Root's	C. P. Root	Gilbertsville.
Roseboom	C. E. McRorie	Westford.
Schuylers Lake	John J. Rider	Schuylers Lake.
Shamrock	C. F. Freer	Gilbertsville.
Sponenbergh, W. H	W. H. Sponenbergh	Fly Creek.
Stanley	T. P. Doran	Middlefield Centre.
Star	Geo. F. Burke	West Burlington.
West Edmeston Condensery	Empire State Condensed Milk Co	West Edmeston.
West Exeter	H. C. Brockway	Richfield.
Westford	C. E. McRorie	Westford.
Wilber Lake	J. W. Taylor	Oneonta.
Wileytown	L P. Young	Oaksville.
Worcester	C. P. Root	Gilbertsville.
Wright, E. W., Nos. 5, 10	E. W. Wright	Burlington Flats.
	ST. LAWRENCE COUNTY.	
Belleville	C. A. Sheffner	Edwards.
Brees	W. F. Burlingame	Richville.
Cooks Corners	J. O. Walrath	Colton.
Cow Patch	M. J. Johnson	De Kalb Junction.
Cream of the Valley	A. W. Overacker	Gouveneur.
Crystal Spring	Henry Gaddis	Gouveneur.
De Peyster No. 1	C. E. Griffin	De Peyster.
East Canton	Sheldon Brewer	Canton.

East Lisbon	J. H. Foster	Flackville.
Elmdale	H. F. Smith	Elmdale.
Elmgrove	W. O. Goodison	Heuvelton.
Fairview	M. M. Mayne	Heuvelton.
Heuvelton	A. B. Hargrave	Heuvelton.
Highland	C. C. Chase	Canton.
Hodgkin	John H. Berry	Spragueville.
Howard	H. L. Grant	Rensselaer Falls.
Island Branch	E. L. Mills	Gouveneur.
Jenney Creek	Wilson Wing	Pitcairn.
Marshville	C. F. Place	Hermon.
Plumb Creek	Thos. Brainerd	South Russell.
Rensselaer Falls	H. G. Grant	Rensselaer Falls.
Rockiceland	J. E. Dalton	Gouveneur.
St. Lawrence	Frank Northup	Brier Hill.
Scotch Settlement	Peter Weber	Ox Bow.
South Canton No. 1	Lewis & Shannon	Canton.
South Canton No. 2	Lewis & Shannon	Canton.
South Fowler	Perley Covey	Spragueville.
Wegatchie	Jas. A Miller	Wegatchie.
West Canton	A. J. Gilson	Rensselaer Falls.
West Hermon	R. M. Mills	Hermon.

SCHOHARIE COUNTY.

Warnerville Union	W. J. Mellon	Cobleskill.

SCHUYLER COUNTY.

Beaver Dams	J. J. Putnam	Beaver Dams.
Sugar Hill	C. S. Putnam	Sugar Hill.

LIST OF STATE CHEESE BRANDS ISSUED DURING THE YEAR, ETC.—STEUBEN COUNTY — (*Continued*).

NAME OF FACTORY.	Applicant.	Post-office.
Bennetts Creek	W. C. Bassett	Bennetts Creek.
Big Creek	J. W. Bennett	Howard.
Brom	Geo. L. German	West Union.
Call Hill	D. A. Oakes	Purdy Creek.
Drake	John J. Stephens	Jasper.
Dryden Ridge	Waller Hacket	Andover.
East Troupsburg	Jas. McKinley	Troupsburg.
Guinn	Henry Schwab	Andover.
Highup	Porter Stephens	Highup.
Kanona	H. Dillenbeck	Kanona.
Neils Creek	E. P. Clymo	Avoca.
Rexville	Jas McKinley	Rexville.
Troupsburg	Jas. McKinley	Troupsburg.
Wallace	I. F. Barnes	Wallace.
Woodhull	T. J. Carmody & Co	Woodhull.
Young Hickory	G. H. Richardson	Young Hickory.
	SULLIVAN COUNTY.	
White Sulphur Springs	C H. Bunger	New York City.
	TOMPKINS COUNTY.	
Dairy Building	H. H. Wing	Ithaca.
Etna Co-operative	Charles Bryant	Etna.
McLean	Joseph Lammle	New York.

WASHINGTON COUNTY.

Hebron Valley	F. P. Hawkins	West Hebron.
Slyborough	Charles Aldour	Slyborough.
South Easton	Skiff & Gifford	South Easton.

WAYNE COUNTY.

Red Creek	G. W. Brinkerhoff	Red Creek.

WYOMING COUNTY.

Attica No. 1	W. A. Cowdin	Attica.
Castile	L. C. Lelch	Castile.
East Koy	C. H. Beview	East Koy.
Excelsior No. 7	M. D. Winchester	Attica.
Gainesville	A. L. Fuller	Gainesville.
Greene, C. A	C. A. Greene	Warsaw.
Griffith's	Young & Young	Fillmore.
Hermitage	H. E. Dolph	Hermitage.
North Arcade	E. L. Jones	Delevan.
Park	Robert Newton & Co	Attica.
Pike Centennial	Mrs. E. B. Willard	Pike.
Sandusky Nos. 4, 6, 7, 11	J. B. Lewis	Sandusky.
Star Nos. 2, 3, 4	T. J. Hubbard	Wethersfield.
Wethersfield Springs	G. R. Safford	Wethersfield.
Wing Street	E. O. Wood	Bliss.

The use of this full cream cheese brand upon the cheese of that quality of the State of New York is, in my judgment, producing good results to the cheese makers. There is, however, a seeming tendency on the part of certain of the manufacturers to be a little heedless or careless in the care or use of the brands, notwithstanding the diligent effort put forth by this Department to get them to use them strictly in accordance with the law and the rules and regulations under which they are issued. A non-observance of the requests made by this Department has produced a condition whereby brands have wandered from the factories to which they were issued and have, in some instances, possibly, been used on cheese manufactured at other factories. At least that feeling has grown up and the statement has been made, in some instances, to that effect. My attention has been notably called to it recently by the fact that my assistant in this office was subpoenaed across the State to attend as a witness in a slander case, the assertion being that the brand had been wrongfully used. I have endeavored to impress upon the minds of the people using these brands that it is not the worth of the brand itself that we are trying to protect, but its right of use and the value that accrues therefrom. I am making an earnest effort this year to gather them all in, so we can know whether they have been destroyed, or have been taken from the factory to which they were issued to other parts of the State.

PROSECUTIONS.

During the year the following cases have been made in this Department and forwarded to the Attorney-General for prosecution, namely: ,

Cases Referred to the Attorney-General From October 1, 1896, to October 1, 1897.

OCTOBER 1, 1896.

MILK.

People *v.* H. Davenport (No. 573).
People *v.* C. M. Spencer (No. 3953).
People *v.* Frederick Merrill (No. 3242).
People *v.* Julius Goldstein (No. 3243).

OCTOBER 9, 1896.

MILK.

People *v.* Westbrook Sisters (No. 3230).
People *v.* Chas. E. Woodard (No. 3957).
People *v.* P. Sermell (No. 3959).
People *v.* James Duffy (No. 3960).
People *v.* David Quinlan (No. 3962).

OCTOBER 10, 1896.

VINEGAR.

People *v.* Daniel J. Roach (No. 1029).

MILK.

People *v.* Wm. H. Nelson (No. 3503).
People *v.* Chas. H. Seabrook (No. 3501).
People *v.* Joshua Jones (No. 2515).
People *v.* Clark Moore (No. 159).

OCTOBER 13, 1896.

MILK.

People *v.* John McLoon (No. 2216).
People *v.* Louis Bolia (No. 2217).
People *v.* Henry Leible (No. 3633).
People *v.* J. Wilker (No. 3607).
People *v.* John Steylmier (No. 3632).
People *v.* Zofil Golenbek (No. 3639).
People *v.* Alphonso Pepe (No. 3655).
People *v.* Robert Schieder (No. 3626).
People *v.* Joseph Konlokofski (No. 3634).

OCTOBER 16, 1896.

VINEGAR.

People *v.* Mrs. Magdelene Hoffman (No. 791).
People *v.* D. F. O'Neill (No. 116).

MILK.

People *v.* Chas. Atkins (No. 2841).
People *v.* Estate of John O'Connor (No. 2815).
People *v.* Herbert Van Valkenburgh (No. 2814).
People *v.* Allen P. Cook (No. 2505).

OCTOBER 17, 1896.

VINEGAR.

People *v.* C. M. and R. Thompkins (No. 1215).

MILK.

People *v.* C. M. Lovell (No. 1592).
People *v.* James Cain (No. 1609).
People *v.* Thomas Spees (No. 3460).
People *v.* C. S. Seaman (No. 1612).

OCTOBER 19, 1896.

MILK.

People *v.* Frank Mycoske (No. 3660).
People *v.* Frank Ninchel (No. 3659).

OCTOBER 20, 1896.

MILK.

People *v.* L. W. Perry (No. 3161).
People *v.* Watt Bros. (No. 3244).
People *v.* Watt Bros. (No. 3963).
People *v.* Produce Milk Co. (No. 3244).
People *v.* W. C. Osterhout (No. 2816).

OCTOBER 22, 1896.

MILK.

People *v.* Frank Francis (No. 3668).
People *v.* Jos. Krulikweske (No. 3667).

OCTOBER 26, 1896.

MILK.

People *v.* Williams (No. 3964).

OCTOBER 29, 1896.

MILK.

People *v.* Samuel Merrifield (No. 3319).
People *v.* Mike Sullivan (No. 3405).

NOVEMBER 3, 1896.

MILK.

People *v.* John M. Curtis (No. 3157).

NOVEMBER 17, 1896.

MILK.

People *v.* Nelson B. Crill (No. 3952).
People *v.* John Bradley (No. 3463).
People *v.* Herbert D. Seely (No. 3159).
People *v.* Herbert D. Seely (No. 3161).
People *v.* Daniel H. Bennett (No. 3162).

VINEGAR.

People *v.* Chas. Kline (No. 1228).
People *v.* Schornstheimer & Stampp (No. 1227).
People *v.* J. W. Hill (No. 1223).
People *v.* Martin Shannon (No. 1220).
People *v.* Geo. H. Rogers (No. 1230).
People *v.* P. J. Lee (No. 1216).
People *v.* Guy Sayles (No. 1218).
People *v.* Guy Sayles (No. 1219).
People *v.* Geo. H. Haight (No. 1217).

NOVEMBER 23, 1896.

OLEOMARGARINE.

People *v*. Wm. Miller, Manager (No. 1170).
People *v*. Dennis O'Leary (No. 1435).
People *v*. Waller Briggs (Nos. 825, 3908.)
People *v*. Adelbert Hotchkiss (No. 4263).

JANUARY 4, 1897.

VINEGAR.

People *v*. Isadore Yurro (No. 126).
People *v*. Michael Savarse (No. 513).

OLEOMARGARINE.

People *v*. Frederick Hodecke (No. 1079).
People *v*. August D. Wiese (No. 1376).
People *v*. Christopher Malone (No. 1377).
People *v*. John C. Williams (No. 1389).
People *v*. Henry Keever (No. 1390).
People *v*. John H. Wahltmann (No. 1391).
People *v*. Chas. Rohde (No. 1395).
People *v*. Herman Wilekens (No. 1396).
People *v*. James Armstrong (No. 1402).
People *v*. Thos. P. Foley (No. 1403).
People *v*. James Armstrong (No. 1440).
People *v*. Joseph Heaslip (No. 1442).

JANUARY 5, 1897.

VINEGAR.

People *v*. Matthew Moller.
People *v*. O. S. Davis.
People *v*. John O'Rourke.
People *v*. G. H. Stringham & Son (No. 1232).
People *v*. Edmund Gilbert (No. 1233).
People *v*. Alexander Primble (No. 1234).

People *v.* Geo. Haskins (No. 1235).
People *v.* P. R. Welch (No. 1236).
People *v.* John Shirley (No. 1237).

MILK.

People *v.* Thos. Ingelow & Son (No. 3173).

JANUARY 13, 1897.

OLEOMARGARINE.

People *v.* Louis H. Orleman (No. 1661).
People *v.* Waters & Linden (No. 1662).
People *v.* Brusie & Emory (No. 1659).

MILK.

People *v.* James Hoag (No. 943).
People *v.* Geo. S. Hicks (No. 944).
People *v.* Everett W. Bedell (No. 945).
People *v.* Jos. I. Haight (No. 950).
People *v.* Homer Case (No. 949).
People *v.* John Townsend (No. 4151).
People *v.* James E. Smith (No. 4159).

JANUARY 14, 1897.

VINEGAR.

People *v.* C. Ruecher (No. 374).
People *v.* John Maule (No. 375).
People *v.* August Will (No. 376).
People *v.* Edward Theel (No. 377).
People *v.* F. W. Ives (No. 378).
People *v.* C. M. Campbell (No. 382).

MILK.

People *v.* J. L. Pease (No. 4154).
People *v.* Elmer Sutherland (No. 4152).
People *v.* William H. Moore (No. 2866).

People *v.* Alonzo Horton (No. 941).
People *v.* James M. Ashton (No. 942).
People *v.* J. Taylor (No. 4155).

NOVEMBER 24, 1896.

VINEGAR.

People *v.* Frederick Christ (No. 384).
People *v.* F. Wellmer (No. 373).

MILK.

People *v.* S. Kankiewicz (No. 3682).
People *v.* Fred J. Harnan (No. 3631).
People *v.* J. C. Deviney (No. 2357.)
People *v.* John Oltz (No. 3903).
People *v.* Joseph Danforth (No. 2354).
People *v.* W. M. Alexander (No. 959).
People *v.* Charles Van Buren (No. 2364).
People *v.* Alden Kinney (No. 2399).
People *v.* George T. Gollands (No. 2400).
People *v.* E. D. Green (No. 2859).
People *v.* George G. Kelly (No. 1963).
People *v.* Leonard Preston (No. 1966.)
People *v.* Mrs. Mattie Dunham (No. 2853).
People *v.* Q. P. Clark (No. 940).
People *v.* Peter Clark (No. 2864).
People *v.* Peter Rockefeller (No. 1136).
People *v.* William Ahrens (No. 1125).
People *v.* James Miller (No. 1128).

NOVEMBER 25, 1896.

OLEOMARGARINE.

People *v.* Herbert Sheppard (No. 1436).
People *v.* Henry Reese (No. 1437).
People *v.* Henry Nicholson (No. 1439).

NOVEMBER 27, 1896.

VINEGAR.

People *v.* T. C. McCarthy (No. 1222).

DECEMBER 3, 1896.

MILK.

People *v.* Earl Harp (No. 322).
People *v.* John Browning (No. 332).
People *v.* Hamilton Perkins (No. 365).

VINEGAR.

People *v.* Michael Clary.
People *v.* Patrick Sellers (No. 315).
People *v.* Henry Brown.

OLEOMARGARINE.

People *v.* Frank Thomas (No. 1171).
People *v.* Frederick Pfleuger (No. 1333).
People *v.* Joseph Pryor (No. 1441).

JANUARY 2, 1897.

MILK.

People *v.* John Tanton (No. 827).
People *v.* E. S. Hunt (No. 847).
People *v.* E. S. Hunt (No. 245).
People *v.* A. M. Graham (No. 4254).
People *v.* Morris Fitzgerald (No. 4265).

JANUARY 14, 1897.

MILK.

People *v.* C. J. Fisher (No. 3816).
People *v.* George Raines (No. 3817).
People *v.* George Raines (No. 3818).
People *v.* Henry Neu (No. 3692).
People *v.* Frank Francis (No. 3696).
People *v.* John Krzyancwski (No. 3803).

JANUARY 15, 1897.

VINEGAR.

People *v* J. A. Griffin (No. 113).

JANUARY 29, 1897.

VINEGAR.

People *v*. Norman W. Pond (No. 1240).
People *v*. Walter F. Pratt (No. 1244).
People *v*. Cheney & McGee (No. 1247).
People *v*. George M. Davis (No. 1248).

FEBRUARY 8, 1897.

MILK.

People *v*. Mrs. Mary A. Griffith (No. 3968).
People *v*. C. W. Rogers (No. 4259).
People *v*. J. Barney (No. 4268).

VINEGAR.

People *v*. August Lange (No. 521).
People *v*. Govanni Gangeni (No. 1048).
People *v*. Angelo F. Ghigtion (No. 522).
People *v*. Alart McGuire (No. 1046).
People *v*. John F. Donlon (No. 523).
People *v*. Henry Folk (No. 524).
People *v*. Joseph Rosenbasch (No. 517).
People *v*. John J. Kenney (No. 525).

OLEOMARGARINE.

People *v*. Kate Taylor (No. 1870).
People *v*. William Fox (No. 1394).
People *v*. Ellen Sheehan (No. 1444).
People *v*. William Schmidt (No. 1388).
People *v*. Anna Brand (No. 1379).
People *v*. Henry Christgan (No. 1375).
People *v*. John Murphy (No. 1865)

People *v.* Robert Armstrong (No. 1866).
People *v.* Mary Hagen (No. 1378).
People *v.* Dorcas Phipps (No. 1834).
People *v.* Ernest Maloni (No. 1393).
People *v.* Henrietta Murphy (No. 1443).
People *v.* Margaret Amstead (No. 1863).

FEBRUARY 11, 1897.

MILK.

People *v.* John T. Ford (No. 3184).
People *v.* John and Joseph Watt (No. 3185).
People *v.* David Bitker (barn case No. 1).
People *v.* F. Leistner (barn case No. 2).

FEBRUARY 17, 1897.

VINEGAR.

People *v.* Josiah V. Locklim (No. 1242).
People *v.* Albert A. Carr (No. 1243).

FEBRUARY 25, 1897.

MILK.

People *v.* William Prindle (No. 1145).
People *v.* E. Rogers (No. 3012).

OLEOMARGARINE.

People *v.* Charles W. Clinton (No. 87).
People *v.* James M. DeGarmo (No. 97).
People *v.* Sebastin C. Jones (No. 1663).
People *v.* Louisa O. Lent (No. 95).
People *v.* Julia Lynch (No. 100).
People *v.* Mary Altz (No. 1506).
People *v.* Henry Weinhall (No. 1507).

VINEGAR.

People *v.* Townsend Loden (No. 1146, B).
People *v.* James Cummings (No. 1149, B).
People *v.* Samuel I. Pugsley (No. 90).
People *v.* Leonard J. Tompkins (No. 871).
People *v.* Frank DeRevere (No. 1827).
People *v.* H. J. Hayes & Co. (No. 91).

FEBRUARY 27, 1897.

MILK.

People *v.* Ed. C. Gulberlett (No. 3189).

MARCH 5, 1897.

MILK.

People *v.* Gabriel Rich (No. 3809).
People *v.* William Duttweiler (No. 3831).
People *v.* Joseph Diemert (No. 3833).
People *v.* Anton Kruscha (No. 3844).
People *v.* H. M. Kimball (No. 3850).
People *v.* Adolph W. Becker (No. 4821).

VINEGAR.

People *v.* Winkler Brothers (No. 701).
People *v.* Fred Schwartz (No. 540).

MARCH 8, 1897.

MILK.

People *v.* J. J. O'Connor.

VINEGAR.

People *v.* Eldridge & Ellis.

MARCH 9, 1897.

MILK.

People *v.* W. S. Price (No. 4272).
People *v.* W. S. Price (No. 4273).
People *v.* W. S. Price (No. 4271).
People *v.* W S. Price (No. 4269).
People *v.* W. S. Price (No. 4270).

MARCH 9, 1897.

MILK.

People *v.* **Virgil Kling (No. 2817).**
People *v.* **F. P. Beard (No. 2818).**

MARCH 17, 1897.

OLEOMARGARINE.

People *v.* **Mrs. S. S.** Williams (No. 1453).
People *v.* **Mrs.** J. C. Bryant (No. 1456).

MARCH 22, 1897.

VINEGAR.

People *v.* L D. Cookingham (No. 1573).

MILK.

People *v.* Peter Hosenfeld (No. 3192).

MARCH 24, 1897.

VINEGAR.

People *v.* Alvin L. Ham (No. 98).
People *v.* Martin Vincent (No. 100).
People *v.* Philip L. Ham (No. 1864).
People *v.* Frank Horth (No. 466).
People *v.* John M. Shook & Willis Roraback (No. 1862).
People *v.* Ezra D. Niver (No. 97).
People *v.* John Chase (No. 587).
People *v.* Edward Whalen (No. 588).
People *v.* Daniel Reardon (No. 589).
People *v.* Michael Reardon (No. 590).
People *v.* Michael Cullen (No. 591).

MARCH 29, 1897.

OLEOMARGARINE.

People *v.* Benj. J. Cheney (No. 4070).

MARCH 30, 1897.

VINEGAR.

People *v.* Willis E. Barlow (No. 467).
People *v.* John Bates & Wm. H. Van Pelt (No. 592).
People *v.* Thos. Gaynor (No. 601).
People *v.* H. Hershfeld & Leo Hershfeld (No. 1832).
People *v.* H. Hershfeld & Leo Hershfeld (No. 1833).
People *v.* Albert F. Hackharth (No. 1834).
People *v.* John Nicholson (No. 1835).
People *v.* Ira J. Hunter (No. 1836).
People *v.* Mrs. John Brahm (No. 1837).
People *v.* Frederick W. Schaper (No. 1838).

OLEOMARGARINE.

People *v.* St. Agatha's Home.

VINEGAR.

People *v.* Stephen M. Sherwood (No. 88).
People *v.* Mrs. Florence B. Childs (No. 1839).
People *v.* James W. Carroll (No. 1840).
People *v.* Lorenzo Sniffens (No. 1842).
People *v.* James Butler (No. 1844).
People *v.* Wm. A. Kearney (No. 1845).
People *v.* Geo. Sennett (No. 1851).
People *v.* Thos. F. Queechy & Jno. Smith (No. 893).
People *v.* Daniel Deegan (No. 894).

MILK.

People *v.* Wm. A. Waterbury (No. 1551).

VINEGAR.

People *v.* Wm. Zelie & Caleb J. Shade (Nos. 92, 94).
People *v.* J. C. Belknapp (No. 93).
People *v.* Wm. Palin (No. 1858).
People *v.* Jos. Linglois (No. 1855).

People *v.* Jas. Guilford (No. 1854).
People *v.* Mrs. Bridget Rainey (No. 1853).
People *v.* John E. Walker (No. 1638).
People *v.* Lewis H. Smith (No. 1633).

APRIL 2, 1897.

OLEOMARGARINE.

People *v.* James Shields (No. 1363).
People *v.* Baker, Carver & Morell (No. 1357).
People *v.* Baker, Carver & Morell (No. 1362).
People *v.* Jas. C. Borroughs (No. 1385).
People *v.* Edward Browhoff (No. 1392).
People *v.* Oscar Lenk (No. 1447).
People *v.* Chris Schomaker (No. 1448).
People *v.* Henry Kaatze (No. 1451).
People *v.* Peter C. Feldman (No. 1316).
People *v.* Jas. C. Borroughs (No. 1869).
People *v.* Mary Rudd (No. 1971).
People *v.* Chas. E. Miller (No. 1973).
People *v.* James Doherty (No. 1975).
People *v.* Geo. Muhlhoefer (No. 1977).
People *v.* Chas. Frierson (No. 1518).
People *v.* Jos. Higgins (No. 1517).
People *v.* Michael Foley (No. 1446).
People *v.* John O'Connell (No. 1356).
People *v.* Michael Meade (No. 1867).
People *v.* Jas. Wright (No. 1966).

VINEGAR.

People *v.* John Carleton (No. 518).
People *v.* Sophia Winkelman (No. 526).
People *v.* Nicolo Cannello (No. 527).
People *v.* D. William Stowesend (No. 531).
People *v.* Theo. B. Apger (No. 533).
People *v.* John Schleger (No. 1026).
People *v.* Cord Biscoff (No. 1041).

People *v.* Galien Burnimo (No. 1049).
People *v.* John A. Schlegd (No. 1050).
People *v.* John F. Rieckhoff (No. 1052).
People *v.* W. L. M. Grandeman (No. 1054).
People *v.* E. Fichtner (No. 1057).
People *v.* John Wendelken (No. 911).
People *v.* Jacob Rick (No. 912).

APRIL 17, 1897.

MILK.

People *v.* Peter Gaughran (No. 3967).

APRIL 21, 1897.

MILK.

People *v.* Wm. J. Ellis (No. 2874).
People *v.* Mrs. L. C. Goudy (No. 2873).
People *v.* John N. Ladue (No. 3013).
People *v.* Chas. W. Bogardus (No. 3014).
People *v.* Jos. I. Haight (Nos. 3016, 3017).
People *v.* Birdsey & Young (No. 3015).
People *v.* Wm. H. Dewitt (No. 4920).

APRIL 29, 1897.

MILK.

People *v.* John T. Decker (No. 3027).
People *v.* Jas. I. Davis (No. 3030).
People *v.* William Lane (No. 3031).
People *v.* Martin Van Etten (No. 3033).
People *v.* Martin Van Etten (No. 3032).
People *v.* John Valentine (No. 3035).
People *v.* Alfred D. McKenstry (No. 4929).
People *v.* Edward Simmons (No. 3039).
People *v.* Edward Simmons (No. 3040).
People *v.* Hezekiah W. Hoffman (No. 3041).
People *v.* Jas. E. Lefever (No. 3042).

People *v.* Thos. J. Butler (No. 3043).
People *v.* John Carlin (No. 3044).
People *v.* John P. Gildersleeve (No. 3045).
People *v.* Frank McMahon (No. 3046).
People *v.* Johnson Hasbrook (No. 3047).

MAY 3, 1897.

MILK.

People *v.* John Coppins (No. 3930).
People *v.* Wm. Helenbeck (No. 4260).

MAY 4, 1897.

MILK.

People *v.* Henry Coe (No. 3479).
People *v.* C. E. Edson (Nos. 3484, 3491).

MAY 6, 1897.

MILK.

People *v.* Johnson Hasbrook (No. 3048).

MAY 14, 1897.

MILK.

People *v.* Wm. C. Kreutsberg (No. 3049).
People *v.* Floyd W. Hyatt (No. 4927).
People *v.* Chas. Van Buren (No. 4903).
People *v.* Elisha Holmes (No. 4904).
People *v.* Wm. M. Smith (No. 4930).
People *v.* Wm. M. Smith (No. 4929).
People *v.* Frederick Miller (No. 4932).
People *v.* Ira B. Kennard (No. 4933).
People *v.* John Welch (No. 4934).
People *v.* Wm. A. Ganung (No. 4935).
People *v.* Hosea F. Lounsberry (No. 948).
People *v.* Amos L. Sheldon (No. 4923).

Vinegar.

People *v.* Mary Loan (No. 1045).
People *v.* Ludwig Woelfer (No. 1039).
People *v.* Henry L. R. Pershall (No. 1368).
People *v.* William H. Cohen (No. 1369).
People *v.* Aaron Rappaport (No. 1370).
People *v.* Domenico Consoli (No. 1371).
People *v.* Ernest Struss (No. 1372).
People *v.* Mary Bennett (No. 1373).
People *v.* Carl Sandstrom (No. 1374).
People *v.* John J. Hillis (No. 1376).

Oleomargarine.

People *v.* John H. Thorp (No. 1000).
People *v.* William Vogel (No. 1972).
People *v.* Gus Swanberg (No. 1976).
People *v.* Rebecca A. Perry (No. 1979).
People *v.* Elizabeth Morris (No. 1990).
People *v.* Bernhard Heyman (No. 1991).
People *v.* Ellen Crownen (No. 1992).
People *v.* Joseph E. Warner (No. 1993).
People *v.* John Damsar (No. 1994).

MAY 26, 1897.

Oleomargarine.

People *v.* Henry G. Oaks (No. 1457).

Milk.

People *v.* George Pollard (No. 3819).
People *v.* Jacob Donner (No. 3829).
People *v.* Schrerle (No. 3839).
People *v.* E. L. McKees (No. 4838).
People *v.* F. F. Stetanowski (No. 4861).
People *v.* John Stableski (No. 4862).
People *v.* John Andrzynowski (No. 4864).
People *v.* Charles Hedtke (No. 4863).

People *v.* Henry Vooinkel (No. 4855).
People *v.* William Wookerle (No. 4868).
People *v.* C. S. Nortrant (No. 4848).
People *v.* John Lukrel (No. 4873).
People *v.* Michael Schneider (No. 4382).

JUNE 16, 1897.

MILK.

People *v.* James Mills (No. 3673).

JUNE 21, 1897.

MILK.

People *v.* Moses R. Shaffer (No. 4921).
People *v.* Mrs. Catherine Fluery (No. 4908).
People *v.* Edward McMahon (No. 4905).
People *v.* Benjamin F. Brown (No. 2657).
People *v.* Peter Turner (No. 1140).
People *v.* Wash. F. Conklin (No. 1137).
People *v.* Clarence J. Howell (No. 2659).
People *v.* C. H. Crookston (No. 4915).
People *v.* Mrs. Ann Eliza House (No. 4909).

VINEGAR.

People *v.* Frank K. Walsh (No. 453).

OLEOMARGARINE.

People *v.* Julia Lynch (No. 1671).
People *v.* Henry Weenhold (No. 1521).

JUNE 28, 1897.

MILK.

People *v.* Peter Fisher (No. 2656).
People *v.* Henry Wahlthman (No. 2655).
People *v.* Criss Letzenbaur (No. 2654).
People *v.* Martin Vandervort (No. 2668).

VINEGAR.

People *v.* Frederick Norris (No. 625).

JULY 1, 1897.

MILK.

People *v.* J. C. Maron (No. 3976).
People *v.* James C. Baldwin (No. 3975).

JULY 6, 1897.

MILK.

People *v.* Edward Irving (No. 1141).
People *v.* Charles M. Schofield (No. 1143).
People *v.* James W. Pettitt (No. 1144).
People *v.* Leonard Haight (No. 2975).
People *v.* Thomas Lawler (No. 2977).
People *v.* Charles W. Boice (No. 2978).
People *v.* Gendon Swift (No. 4926).
People *v.* Mrs. Carrie Storms (No. 2984).
People *v.* Howard Van Vlack (No. 2983).

VINEGAR.

People *v.* Joseph E. Demond (No. 1877).
People *v.* Abram Hendricks and H. Swartz (No. 1871).
People *v.* John Tenhagen (No. 914).
People *v.* John M. Dearborn (No. 606).
People *v.* John M. Dearborn (No. 605).
People *v.* William M. Edwards (No. 607).
People *v.* Myron H. Braested (No. 604).
People *v.* Benjamin A. Powell (No. 603).

JULY 7, 1897.

MILK.

People *v.* Samuel Blair (No. 4264).
People *v.* Samuel Blair (No. 4274).
People *v.* William Buckneer (No. 4275).
People *v.* Godfrey Buckneer (No. 4284).

JULY 8, 1897.

MILK.

People *v.* Henry Kemp (No. 3025).
People *v.* George W. Knoll (No. 3005).
People *v.* Mary Graham (No. 3004).
People *v.* John Morrisson (No. 2676).
People *v.* Michael Clark (No. 2986).

JULY 12, 1897.

MILK.

People *v.* Charles R. Vosburgh (No. 4035).

JULY 21, 1897.

VINEGAR.

People *v.* Adolph Bernhardt (No. 1067).
People *v.* Vincenzo Cerbo (No. 1055).
People *v.* Gaetano Rebitty (No. 1066).
People *v.* Filomena Damico (No. 1413).
People *v.* Alphonso Germano (No. 1411).
People *v.* Severio Sica (No. 1418).
People *v.* Antonio Marmo (No. 1062).
People *v.* Joseph Corbo (No. 1398).
People *v.* Francisco Lintrento (No. 1378).
People *v.* Romenico Marre (No. 1407).
People *v.* Raphael Lewis (No. 1410).
People *v.* Fedela Espositio (No. 1414).
People *v.* Angelo Frencesco (No. 1415).
People *v.* Jim Riviello (No. 1417).
People *v.* Antonio Di Lemine (No. 1400).
People *v.* Marguarite Zanzoni (No. 1406).
People *v.* Mike Capotorto (No. 1416).
People *v.* Gelardo Palese (No. 1408).
People *v.* Carl C. Lange (No. 1403).
People *v.* Giovanni Fanciulli (No. 1047).
People *v.* Guissipi Milliano (No. 1040).

People *v.* Nicholas Remington (No. 1469).
People *v.* Caster Spinello (No. 1063).
People *v.* Joe Scarivilleni (No. 1064).
People *v.* Sylester Fidanzie (No. 1060).
People *v.* Louis Repitti (No. 1056).
People *v.* Caetano Sciolino (No. 1397).
People *v.* Giovanni Deferrari (No. 1375).
People *v.* Charles Schriver (No. 1402).
People *v.* Thoney George (No. 1391).
People *v.* Francesco Mannsco (No. 1412).
People *v.* John A. Schlegel (No. 100).

OLEOMARGARINE.

People *v.* Max J. Adler (No. 1916).
People *v.* Mariah Larkin (No. 1917).
People *v.* William C. Root (No. 1982).
People *v.* Miss Elinor Gray (No. 1918).
People *v.* Fred Miller (No. 1401).

MILK.

People *v.* Sam Menchas (No. 4656).
People *v.* William M. Bliss (No. 4651).

JULY 27, 1897.

MILK.

People *v.* Morgan (No. 4276).
People *v.* Mary Stark and Irving Stark (No. 4280).
People *v.* Mary Stark and Irving Stark (No. 4280.)
People *v.* Jacob J. Weaver and Herman Weaver (No. 4277).
People *v.* James Fitzgerald (No. 4255).

AUGUST 4, 1897.

MILK.

People *v.* Chas B. Peck (No. 5351).
People *v.* John J. O'Hara (No. 5352).
People *v.* Geo. Tompkins (No. 5353).

People *v.* Sandford Merritt (No. 5354).
People *v.* Geo. H. Akin (No. 5355).
People *v.* James C. Haight (No. 5356).
People *v.* Michael Kerions (No. 5357).

AUGUST 6, 1897.

MILK.

People *v.* Abram Kaynor (No. 2778).
People *v.* Fred J. Human (No. 4892).
People *v.* Jacob Donner (No. 4893).
People *v.* Daniel Schmitt (No. 5204).
People *v.* Thos. Kerby (No. 2776).
People *v.* Emanuel H. Osman (No. 5206).
People *v.* Urban Brandle (No. 5209).
People *v.* Jos. Schufski (No. 5229).
People *v.* Euring (No. 5224).
People *v.* L. M. Taylor (No. 5234).
People *v.* L. Landgraff (No. 5238).
People *v.* Stanislius Cheminski (No. 4898).
People *v.* John Ehlers (Nos. 5236, 5237, 5248, 5249).
People *v.* Jeremiah West (No. 4890).
People *v.* Richard S. Spurr (No. 4889).
People *v.* Ralph Glodden (No. 4895).
People *v.* N. Shead (No. 5253).
People *v.* E. M. Waldron (No. 5220).
People *v.* Anton Kruszka (No. 5250).
People *v.* Frankowick (No. 5214).
People *v.* Frank Schweichler (No. 5257).
People *v.* Michael K. Drunsta (No. 5258).
People *v.* Jos. Eyerer (No. 5259).
People *v.* Frank Michael (No. 5256).
People *v.* Jos. Kormacki (No. 5222).

VINEGAR.

People *v.* Neley S. Hogan (No. 708).
People *v.* E. H. Lawtons (No. 720).
People *v.* Byron P. Clark (No. 539).
People *v.* Fred C. Schraft (No. 706).

AUGUST 10, 1897.

MILK.

People *v.* A. A. Steele (No. 4443).
People *v.* Weber Bros. (No. 4444).
People *v.* Geo. F. Booth (No. 4445).
People *v.* Geo. Statt (No. 4446).
People *v.* Wm. Steinhamp (No. 4416).
People *v.* L. W. Perry (No. 4415).

AUGUST 10, 1897.

BARN CASES.

People *v.* David Bitker (No. 1).
People *v.* Isaac Linesinger (No. 2).
People *v.* Abram Cohen (No. 3).

MILK.

People *v.* John Goers (No. 4044).
People *v.* Deloss W. Cole (No. 4045).
People *v.* J. P. Preston (No. 4365).

AUGUST 12, 1897.

MILK.

People *v.* Jacob Morrison.

AUGUST 16, 1897.

MILK.

People *v.* Henry Kothe (No. 4685).
People *v.* Henry J. Withus (No. 4683).
People *v.* John Dill (No. 4662).
People *v.* Chas. Frolelich (No. 4674).
People *v.* Chas. H. Weston (No. 4679).
People *v.* Harry B. Anderson (No. 4688).
People *v.* Frank McDermott (No. 4661).
People *v.* Albert C. Longwell (No. 4671).
People *v.* Thomas Brady (No. 4680).
People *v.* James Kallina (No. 4675).

People *v.* Robt. Corbett (No. 4669).
People *v.* Chas. H. Tammany (No. 4660).
People *v.* Fred Lehrs (No. 4668).
People *v.* John H. Brokate (No. 4691).
People *v.* Cook Bros. (No. 4666).
People *v.* Lewis Doht (No. 4670).
People *v.* Harry E. Talmage (No. 4677).
People *v.* Robert F. Stevens (No. 4684).
People *v.* Wm. C. A. Witt (No. 4664).
People *v.* Chris. Oher (No. 4652).
People *v.* Frank D. Jackson (No. 4665).

AUGUST 17, 1897.

MILK.

People *v.* Thomas H. Graham (No. 2692).
People *v.* John Carner (No. 5307).
People *v.* Geo. R. Allendorph (No. 5305).
People *v.* Geo. Dunn (No. 5304).
People *v.* Delmer Hayner (No. 5303).
People *v.* O. C. Newkirk (No. 5302).
People *v.* John D. Myers (No. 2821).

AUGUST 18, 1897.

MILK.

People *v.* Frederick Urick (No. 5321).
People *v.* Chas. Reed (No. 5322).
People *v.* Theo. Williams (No. 5331).
People *v.* Ogden D. Daley (No. 5360).
People *v.* Wm. Sutcliff (No. 5361).
People *v.* John Haupt (No. 5362).

AUGUST 20, 1897.

MILK.

People *v.* Mrs. Nora S. Crossett (No. 3430).
People *v.* James C. Jack, Sr. (No. 3428).
People *v.* Ira Calkins (No. 3449).
People *v.* Herman R. Reinholtz (No. 3418).

MILK.

People *v.* Chas. Kiltz (No. 4508).
People *v.* Patrick Kaun (No. 156).

SEPTEMBER 1, 1897.

MILK.

People *v.* Andrew McManus (No. 3450).
People *v.* James Burns (No. 3496).
People *v.* Herman Snearly (No. 3443).
People *v.* John Madison (No. 4258).
People *v.* Adelbert Carl (No. 4313).
People *v.* Orville T. Oliver (No. 4301).
People *v.* Thos. McMahon (No. 4314).
People *v.* Wm. H. Kane (No. 4312).
People *v.* Chas. D. Stannard (No. 4278).
People *v.* Dennis Hanrahan (No. 3493).
People *v.* Dennis Hanrahan (No. 3442).
People *v.* Wm. Lenord (No. 3444).
People *v.* L. D. Rudd (No. 3440).
People *v.* Harry Demunn (No. 3448).
People *v.* Erven C. Bailey (No. 3445).
People *v.* A. B. Smith (No. 3494).
People *v.* Fred Knoeferl (No. 4424).
People *v.* Wm. H. Robinson (No. 4376).

SEPTEMBER 3, 1897.

MILK.

People *v.* Geo. Kautz (No. 2677).
People *v.* Patrick Mead (No. 2686).
People *v.* Frederick McLoughlin (No. 5323).
People *v.* Samuel B. Hill (No. 5363).
People *v.* James E. Jennings (No. 5364).
People *v.* Winnie H. McDowell (No. 5365).
People *v.* Mrs. Agnes Livingston (No. 5366).
People *v.* Jos. and Thos. Sherman (No. 5367)

SEPTEMBER 7, 1897.

MILK.

People *v.* A. Rimiller (No. 3981).
People *v.* Moses I. Barrus (No. 2599).
People *v.* Caleb F. Lund (No. 2600).

SEPTEMBER 9, 1897.

MILK.

People *v.* Chas. H. Partlow (No 2218).
People *v.* Wm. Lawton (No. 4514).

SEPTEMBER 15, 1897.

MILK.

People *v.* Chas. Race (No. 4506).

VINEGAR.

People *v.* Louis Marmond (No. 1379).
People *v.* Geo. Griepenkerl (No. 1072).

MILK.

People *v.* Rudolph H. Kaht (No. 4614).
People *v.* Chas. H. Tammany (No. 4611).
People *v.* Wm. H. Nelson (No. 4692).

SEPTEMBER 14, 1897.

MILK.

People *v.* Henry Neal (No. 2826).

SEPTEMBER 20, 1897.

MILK.

People *v.* Geo. Rolling (No. 5264).
People *v.* Michael Cable (No. 5290).
People *v.* Eckert Karch (No. 5275).
People *v.* Jacob Flockowski (No. 3853).
People *v.* Joseph Gursnips (No. 5277).
People *v.* John Follett (No. 5268).

People *v.* Joseph Moore (No. 3885).
People *v.* Geo. M. Fisher (No. 3858).
People *v.* Edward Ringmacher (No. 5267).
People *v.* Christopher Shimiski (No. 3877).
People *v.* Daniel Schmitt (No. 5295).

SEPTEMBER 22, 1897.

MILK.

People *v.* Nicholas Van Patten (No. 4292).
People *v.* Jerome Woodford and Chas. Schofield (No. 4317).
People *v.* Percy A. Bush (No. 4296).
People *v.* Marcello M. Miller (No. 4315).
People *v.* Daniel Huff (No. 4311).
People *v.* Edward Strait (No. 4316).
People *v.* Wm. Alexander (No. 4308).
People *v.* Perry A. Bush (No. 4299).
People *v.* John Burke (No. 4293).
People *v.* K. & O. Johnson (Nos. 4295, 4297).
People *v.* Henry Lasher (No. 4282).
People *v.* John Burke (No. 4294).
People *v.* Cushman & Mudge (No. 4298).
People *v.* Myron Olmstead (No. 4279).
People *v.* Patrick Macksey (No. 4290).

SEPTEMBER 24, 1897.

MILK.

People *v.* Harry McPherson (No. 2598).

SEPTEMBER 25, 1897.

MILK.

People *v.* A. Hutton (No. 2595).
People *v.* Geo. Chapman (No. 2596).

SEPTEMBER 27, 1897.

MILK.

People *v.* Wm. Hatley (No. 876).

SEPTEMBER 28, 1897.

MILK.

People *v.* Emma S. Kessler (No. 2594).
People *v.* Jas. Atkinson (No. 2591).
People *v.* Frank Weis (No. 2593).
People *v.* Henry Fuller (No. 2592).
People *v.* Mrs. John Houthan (No. 4951).

SEPTEMBER 29, 1897.

MILK.

People *v.* Reville Stebbins (No. 4341).
People *v.* James Blackburn (No. 4350).
People *v.* John Warner (No. 4344).
People *v.* A. Warner and J. Warner (No. 4343).
People *v.* Frank Monroe (No. 4309).
People *v.* Elisha A. Wilcox (No. 4336).
People *v.* John W. Atkinson (No. 4339).
People *v.* Jas. Van Buren and Lorenzo Van Buren (No. 4348).
People *v.* Edgar Howland (No. 4318).

APPROPRIATIONS.

In conformity with the provisions of section 5 of the Agricultural Law, I hereby recommend the following appropriations as necessary for the work of the Department of Agriculture, and for the purpose of agriculture generally in the State for the ensuing year:

For the general work of the Department of Agriculture	$100,000
For the New York State Agricultural Society, for premiums	20,000
For Farmers' Institutes	20,000
For the distribution of money among Agricultural Societies and the American Institute of the city of New York	56,000

For the general work of the experiment station at Geneva	$50,000
For the enforcement of the provisions of chapter 437 of the Laws of 1890 (fertilizers)	10,000
For maintaining the Veterinary College at Cornell University	20,000
For the State Weather Bureau	5,000
For the promotion of the beet sugar culture	50,000

For more specific information as to the details of the work in the different divisions of the State, you will please examine the reports of the assistant commissioners of the different divisions, the report of the cheese instructors, director of Farmers' Institutes and the veterinarians forming the appendix to this report. In closing this report I am pleased to say that the assistant commissioners in the different divisions have all demonstrated to my satisfaction during the year that their selection was a good one for the Department work.

I have to announce with sorrow at this time the death of Assistant Commissioner Charles R. Payne, of the Sixth Division, which occurred on December 25th, in the city of Albany, N. Y. Mr. Payne had demonstrated since he had been in this Department, that not only his natural tendencies but his experience had made him broad and generous on all questions pertaining to the affairs of men; that not only his word, but his judgment as well, could be relied upon. His genial spirit made for him friends wherever he went, and his integrity of purpose gave to the work of this Department a strong standing in his division. While we may be able to find others to take his place, it is quite another question whether we will be able to find anybody who will fill it.

APPENDIX.

Report of F. J. H. Kracke, Assistant Commissioner.
Report of Henry S. Ambler, Assistant Commissioner.
Report of T. James Owens, Assistant Commissioner.
Report of S. Brown Richardson, Assistant Commissioner.
Report of Charles R. Payne, Assistant Commissioner.
Report of Verlett C. Beebe, Assistant Commissioner.
Report of William T. Hughes, Assistant Commissioner.
Report of Asa L. Twitchell, Assistant Commissioner.
Report of James P. Clark, Assistant Commissioner.
Reports of Veterinarians.
Reports of Dr. A. L. Haines, Prof. V. A. Moore and Prof. James Law.
Financial Reports of Agricultural Societies for 1897.
List of Dairy and Food Commissioners.
Agricultural Law.
Report of State Weather Bureau. (Volume 2.)
Report of Agricultural Experiment Station at Ithaca. (Volume 2.)
Report of Agricultural Experiment Station at Geneva. (Volume 3.)

REPORT OF F. J. H. KRACKE.

HON. CHARLES A. WIETING, *Commissioner of Agriculture:*

Dear Sir.—I take pleasure in submitting this report of the work performed in this division for the year ending September 30, 1897. The work has been most vigorously prosecuted during the year. Special attention has been given to the violation of the Agricultural Law relating to the illegal sale of oleomargarine and adulterated milk.

The sale of artificially colored vinegar also received a share of our attention. The full record of 188 violations detected during the past fiscal year are herewith given. The largest part of these have been prosecuted and penalties imposed, ranging from the minimum fine, twenty-five dollars ($25) to the maximum fine collected for specific violation, of six hundred dollars ($600.)

Oleomargarine.

The illegal sale of oleomargarine has, as usual, increased during the winter and spring; the balance of the year the price of butter has been low, making the sale of oleomargarine very difficult, even among its friends; but, nevertheless, it requires the utmost vigilance by those employed in this division of the Department to prevent this imitation butter getting a foothold here. Eternal vigilance is the price of liberty and freedom from oleomargarine.

In the detective work that is resorted to by the agents of the Department, some very interesting cases are developed; but a more ingeniously arranged scheme for defrauding customers than the one unearthed recently has never been discovered.

Sauntering along one of the main streets about 10 o'clock one night, a State agent happened to see five tubs of oleomargarine unloaded at a butter, egg and tea store. Being alone, he could not take evidence that night, but the next morning, in company with another agent, he visited the store and asked for some butter. When shown a sample at 23 cents per pound, the would-be buyer wanted something better, and was shown a sample at 25 cents, which pleased him, and he bought two pounds, paying the price asked. This was at once pronounced oleomargarine, and the experts, after showing their shields to prove that they were State officers, demanded another sample to be analyzed. The storekeeper entered a strong protest and threatened to enforce his position with the aid of a revolver and bull dog, both of which were on hand. A long search for the bogus goods followed, and it seemed as if the agents were to be foiled in their attempt to find them. At the rear end of the store a partition extended the full width of the building and from the ceiling to within about two and a half feet of the floor. Behind this partition were the family apartments. All the nooks and corners of the store, as well as the living rooms, were searched without any trace of the oleomargarine; not until the agent threatened to tear down the inside furnishing of the store was the secret revealed. The counter, which appeared to be built up solidly, yielded to the touch of a hidden spring, and one end dropped down revealing a quantity of the imitation butter done up in one or two pound packages. But the five tubs that were delivered the night before did not turn up, and the agents were determined to find these. After a little persuasion another secret spring in the partition was touched and a closely fitted door swung down, which permitted the tubs of oleomargarine to slide out from what was at first supposed to be a large dressing case, which stood in the living apartment close up against the store partition.

Milk.

The milk produced in this State, and shipped to the cities of New York and Brooklyn, has shown but a very small per cent. of adulteration, the cities now receiving, on an average, over a million quarts of milk a day. The quality is equal to that of any previous time, if not superior.

A glance at a map of the territory from which the metropolitan division draws its milk is interesting. Long Island, Westchester and Orange counties are generally known as the source of supply; but in these days, when special refrigerator cars have been built for carrying milk, and cold storage warehouses have been built at way stations for the preservation of milk transported by special fast milk express trains, the dealers reach out beyond the boundaries of our nearby counties and go to far away Steuben, Herkimer and Oneida counties. From the milking of a cow 200 or 300 miles away, until the product reaches the consumer in New York, thirty-six hours may elapse, but the milk arrives pure, cool and sweet. Probably two-thirds of the milk used in the cities is about a day old when the consumer uses it, but owing to the cooling process, cold storage and rapid transit it is in a perfect condition. It is not generally known that on Manhattan Island there were last year 361 cows kept in 128 stables, the largest herd being one at Kingsbridge, of 43 cows, in good, healthy condition. Because of the attention given by the Department of Agriculture to the condition of the cattle through the State, there is a feeling of confidence that disease among cows is not as prevalent as it otherwise would be, and purer and healthier milk the result.

The wholesale and retail dealers in the cities have almost abandoned the practice of watering milk, which was so generally done in the past year. The present milk standard of our State has proved to be very satisfactory and equitable.

Stables.

The customary inspections of stables located in the suburbs of the cities of New York and Brooklyn have been made during the year; also the cows kept therein have been carefully inspected, and such stables and cows in general found to be satisfactory.

Oleomargarine (Statement of Manufacturers, Etc.).

The following table compiled from the statement of the manufacturers for 1896, and the reports of the Commissioner of Internal Revenue, show the amount manufactured and sold during the past eleven years, viz.:

	Pounds.
Manufacturers' estimate for the year ending June 30, 1886	100,000,000

	Pounds.
June 30, 1886, to November 1, 1886, estimated at..	3,305,376
Eight months Internal Revenue report to June 30, 1887	21,694,624
For the year ending June 30, 1887..................	25,000,000
For the year ending June 30, 1888, revenue report..	34,325,527
For the year ending June 30, 1889, revenue report..	35,664,026
For the year ending June 30, 1890, revenue report..	32,324,032
For the year ending June 30, 1891, revenue report..	44,392,409
For the year ending June 30, 1892, revenue report..	48,364,155
For the year ending June 30, 1893, revenue report..	67,224,298
For the year ending June 30, 1894, revenue report..	69,622,246
For the year ending June 30, 1895, revenue report..	56,958,105
For the year ending June 30, 1896, revenue report..	50,853,234
For the year ending June 30, 1897, revenue report..	45,631,227

From the above figures it will be seen that there has been a decrease of 5,222,007 pounds of oleomargarine as compared with 1896.

The following statistics taken from the previous annual reports showing the amount of butter handled in New York, do not show any increase during the years ending November 1, 1885, 1886 and 1887, but shows that about the same amount was received each year, which is accounted for by the fact that oleomargarine was formerly shipped by the manufacturers and dealers in butter, and entered into the statistics as such, there being no way to separate the two. In addition to the oleomargarine received from other States and included in the figures hereinafter given, there was a large quantity made in the city and State of New York previous to 1886, not included in these figures, therefore the increased production of butter for the New York market within the past five years has equaled the amount of oleomargarine formerly consumed, and has also supplied the increase of the population with butter as well as the increased amount for export previously noted.

The following statistics show the number of pounds and value of butter received in New York city yearly, from 1882 to 1884 inclusive, copied from the last annual report and may be of interest as showing the decline from 1882 to 1885, and the advance from 1885 to 1888, and for comparison with the receipts and value of the product handled during the years ending, October 31, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897.

Receipts and Value of Butter Handled in New York City for Sixteen Years, ending October 31, 1897.

FOR THE YEAR ENDING OCTOBER 31, 1882.

Eastern, 44,215,900 pounds, valued at 29½ cents per pound	$13,043,717 05
Western, 35,648,850 pounds, valued at 28 cents per pound	9,981,678 00
Total, 79,864,840 pounds, valued at	$23,025,395 05

FOR THE YEAR ENDING OCTOBER 31, 1883.

Eastern, 4,804,060 pounds, valued at 26 cents per pound	$11,649,055 60
Western, 45,743,850 pounds, valued at 26 cents per pound	10,978,524 00
Total, 90,547,910 pounds, valued at	$22,627,579 60

FOR THE YEAR ENDING OCTOBER 31, 1884.

Eastern, 38,263,820 pounds, valued at 24½ cents per pound	$9,374,635 90
Western, 49,853,350 pounds, valued at 24½ cents per pound	10,967,737 00
Total, 80,117,170 pounds, valued at	$20,342,372 90

FOR THE YEAR ENDING OCTOBER 31, 1885.

Eastern, 39,480,350 pounds, valued at 22 cents per pound	$8,685,677 90
Western, 54,086,500 pounds, valued at 22 cents per pound	10,817,300 00
Total, 93,566,850 pounds, valued at	$19,502,977 00

FOR THE YEAR ENDING OCTOBER 31, 1886.

Eastern, 38,985,520 pounds, valued at 23½ cents per pound	$9,161,597	20
Western, 54,716,000 pounds, valued at 21½ cents per pound	11,763,940	00
Total, 93,701,520 pounds, valued at	$20,925,537	20
Deduct value of product handled in 1886	19,502,977	00
	$1,422,560	20
Deduct value of increased receipts over 1885	28,954	05
Net gain on same amount of receipts of butter over 1885	$1,393,606	15
Total value of milk and cream handled in New York for the year ending October 31, 1886	$8,160,750	00

FOR THE YEAR ENDING OCTOBER 31, 1887 (BUTTER, MILK AND CREAM).

BUTTER.

Eastern, 37,062,130 pounds, valued at 24 cents per pound	$8,894,911	20
Western, 56,650,350 pounds, valued at 22 cents per pound	12,463,077	00
Total, 93,712,480 pounds, valued at	$21,357,988	20

MILK AND CREAM.

Value of milk and cream	9,499,900	00
Total value of butter, milk and cream	$30,857,888	20
Deduct value of butter, milk and cream handled in 1886	29,086,287	20
Net gain in 1887 over 1886	$1,771,601	00
Add net gain in cheese of 1887 over 1886	687,843	00
Total net gain on butter, cheese, milk and cream handled in New York in 1887 over 1886	$2,459,444	00

FOR THE YEAR ENDING OCTOBER 31, 1888 (DAIRY PRODUCTS).

BUTTER.

Eastern, 31,784,410 pounds, valued at 24½ cents per pound	$7,787,180 45
Western, 63,457,950 pounds, valued at 22½ cents per pound	14,278,038 85
Total value of butter handled	$22,065,219 20

CHEESE.

Eastern, 98,877,955 pounds, valued at 10½ cents per pound	$10,362,185 27
Western, 3,636,260 pounds, valued at 8½ cents per pound	309,167 10
In transit for export, 7,636,850 pounds, valued at 10 cents per pound	763,685 00
Total, 110,152,065 pounds, valued at	$11,455,037 37

MILK.

Crude gallons	58,678,390
Cream gallons	1,191,940
Condensed milk (Pearl), gallons	71,830
Total (valued at $9,652,500) gallons	60,622,160

Total value of butter handled	$22,065,219 20
Total value of cheese handled	11,455,037 37
Total value of milk and cream handled	9,652,500 00
Total	$43,172,756 57
Deduct total value of dairy product handled in 1887	$43,047,771 02
Net gain in 1888 over 1887	$124,985 55

The gain in value over 1887, is light, for the reason that the average price of cheese has been one cent per pound lower than in 1887, although butter averaged one-half cent higher.

FOR THE YEAR ENDING OCTOBER 31, 1889 (DAIRY PRODUCTS).

BUTTER.

Eastern, 30,626,610 pounds, valued at 23 cents per pound	$7,024,120 30
Western, 77,820,650 pounds, valued at 21 cents per pound	16,342,336 50
Total, 108,447,860 pounds, valued at	$23,366,456 80

CHEESE.

Eastern, 101,712,655 pounds, valued at 10 cents per pound	$10,171,265 50
Western, 3,660,120 pounds, valued at 9 cents per pound	329,410 80
Total, 105,373,775 pounds, valued at	$10,500,676 30

MILK.

	Gallons.
Six million four hundred twenty-one thousand three hundred eighty-seven cans crude milk of ten gallons	64,213,870
Seventy-six thousand six hundred seven cans unsweetened condensed milk of ten gallons	766,070
One hundred and thirty-two thousand two hundred eighty-four cans of cream of ten gallons	1,322,840
Total gallons	66,302,780

According to the estimate of those best informed on the subject, there has been 1,500,000 quart cans of milk produced within the State of New York during the year, reported sold to condensers, most of which reached the market in a condensed form, in small cans valued in the crude state at $2,175,000, making a total of $11,675,000.

Total value of butter handled................	$23,386,456 80
Total value of cheese handled................	10,500,676 30
Total value of milk, cream and condensed milk handled	11,675,500 00
Total	$45,562,633 10
Deduct total value of dairy products handled in 1888	43,172,756 57
Net gain in 1889 over 1888 is..............	$2,389,876 53
Less value of condensed milk in small cans, 1888	2,175,000 00
Total	$214,876 59

The receipts of eastern butter for the year ending October 31, 1889, were 1,157,800 pounds less than in the previous year, while the amount of cheese received was 2,834,700 pounds in excess of 1888, showing that just about the same amount of product of the dairy in butter and cheese, from the State of New York, has been marketed as in the previous year.

FOR THE YEAR ENDING OCTOBER 31, 1890 (DAIRY PRODUCTS).

BUTTER.

Eastern, 26,560,660 pounds, valued at 20 cents per pound	$5,312,132 00
Western, 71,094,500 pounds, valued at 18 cents per pound	12,797,010 00
Total, 97,655,160 pounds, valued at.......	$18,109,142 00

CHEESE.

Eastern, 102,118,115 pounds, valued at 9¾ cents per pound	$9,956,516 22
Western, 3,483,090 pounds, valued at 8 cents per pound	278,647 20
Total, 105,601,205 pounds, valued at	$10,235,163 42

MILK.

	Gallons.
Six million two hundred eighty-four thousand two hundred ninety-four cans crude milk of ten gallons each	62,852,940
Sixty-nine thousand three hundred sixty-seven cans unsweetened condensed milk of ten gallons each	693,670
One hundred thirty-seven thousand three hundred twenty-one cans cream of ten gallons each	1,373,220
There is also produced within the State of New York, and sold during the year to condensers, most of which reaches this market in condensed form in small cans, a large amount of crude milk, estimated to be equal to 1,650,000 cans of crude milk, of ten gallons each	16,500,000
Total gallons	81,419,830
Valued at	$12,085,000 00

Total value of butter handled	$18,109,142 00
Total value of milk, cream and condensed milk handled	12,085,000 00
Total value of cheese handled	10,233,172 42
Total	$40,427,314 42

FOR THE YEAR ENDING OCTOBER 31, 1891 (DAIRY PRODUCTS).

BUTTER.

Eastern, 395,301 packages of 70 pounds (average), 27,671,070 pounds, valued at 21 cents per pound	$6,364,346 10
Western, 1,408,324 packages, of 50 pounds (average), 70,416,200 pounds, valued at 21 cents per pound	14,787,402 00
Total pounds, 98,087,870, valued at	21,151,748 10

CHEESE.

Eastern, 86,958,200 pounds, valued at 10 cents per pound	$8,695,930 00
Western, 3,331,950 pounds, valued at 9 cents per pound	29,875 50
Total pounds, 90,290,150, valued at	$8,995,806 50

MILK.

	Gallons.
Six million three hundred five thousand seven hundred fifty-six cans of crude milk of ten gallons each	63,057,660
Sixty-nine thousand nine hundred eighty-nine cans of unsweetened condensed milk of ten gallons each	699,890
One hundred forty-four thousand one hundred ninety-eight cans of cream of ten gallons each	1,441,930
There is also produced within the State of New York, and sold during the year to condensers, most of which reaches the New York market in condensed form, in small cans, a large amount of crude milk, estimated to be not less than	17,500,000
Total gallons	82,699,530

Valued at	$14,128,677 00

Total value of butter handled	$21,151,748 10
Total value of cheese handled	8,995,705 50
Total value of milk, cream and condensed milk handled	14,129,677 00
Total value of dairy products handled during the year	$44,277,220 60

The preceding statistics show a material decrease in the number of pounds of butter handled in this city, but as the average price of butter has been three cents per pound higher, the total value of the dairy product handled was $3,042,606.10 greater than during the previous year.

FOR THE YEAR ENDING OCTOBER 31, 1892 (DAIRY PRODUCTS).

BUTTER.

Eastern, 414,765 packages of seventy pounds (average), 29,032,930 pounds, valued at	$6,967,900 00
Western, 1,248,412 packages of fifty pounds (average), 62,420,600 pounds, valued at	13,732,532 80
Total pounds, 91,453,520, value	$20,700,432 80

CHEESE.

Eastern, 91,033,950 pounds, valued at eleven cents per pound	$10,013,734 50
Western, 4,756,510 pounds, valued at ten cents per pound	473,651 00
Total pounds, 93,770,310	$10,487,385 50

MILK.

	Gallons.
Seven millions forty thousand three hundred forty-two cans of crude milk of ten gallons each	70,403,420
Sixty-one thousand six hundred ninety cans of unsweetened milk of ten gallons each	616,900
One hundred eighty-two thousand six hundred eighty-nine cans of cream of ten gallons each.	1,826,890
There is also produced within the State of New York, and sold during the year to condensers, most of which reaches the New York market in condensed form, in small cans, a large amount of crude milk, estimated to be not less than	18,000,000
Total gallons milk, cream and condensed milk	90,847,810

Value of crude milk handled	$10,977,559 97
Value of cream handled	1,050,461 75
Value of unsweetened condensed milk handled.	388,647 00
Value of crude milk sold to consumers	2,700,000 00
Total	$15,116,668 72

Total value of butter handled	$20,700,432 80
Total value of cheese handled	10,487,385 50
Total value of milk, cream and condensed milk handled	15,116,668 72
Total value of dairy products handled during the year	$46,304,487 02

The total increase in value of dairy products over value of products handled in 1891 was $2,027,266.42.

The preceding figures show a material increase in the amount and value of Eastern dairy products handled in the city of New York during the year, as shown by the following table:

Butter, increase 1,361,850 pounds, valued at...	$326,884 00
Cheese, increase 4,074,750 pounds, valued at..	446,223 50
Crude milk, cream and condensed milk, increase 8,147,680 gallons, valued at................	986,991 72
Net gain in increased receipts................	$1,762,058 22
Net gain in advance of prices over 1892......	1,146,302 70
Total gain for year.....................	$2,908,360 92

FOR THE YEAR ENDING OCTOBER 31, 1893 (DAIRY PRODUCTS).

BUTTER.

Eastern, 430,387 packages of seventy pounds (average), 30,126,460 pounds.................	$7,531,615 00
Western, 1,184,708 packages of fifty pounds (average), 59,235,400 pounds, valued at twenty-three cents per pound..............	13,624,042 00
Total pounds, 89,361,860, valued at.......	$21,155,657 00

CHEESE.

Eastern, 87,380,645 pounds, valued at eleven cents per pound..........................	$9,611,870 95
Western, 4,565,205 pounds, valued at ten cents per pound	456,520 50
Total pounds, 91,945,850, valued at.......	$10,068,391 45

MILK.

	Gallons.
Seven million two hundred and forty-six thousand and fifty cans of crude milk of ten gallons each	72,460,500
Fifty-three thousand seven hundred twenty-five cans of unsweetened condensed milk of ten gallons each	537,850

Two hundred three thousand seven hundred forty cans of cream of ten gallons each.....	3,037,404
There is also produced within the State of New York, and sold during the year to condensers, most of which reaches the New York market in condensed form, in small cans, a large amount of crude milk, estimated to be not less than	18,000,000
Total gallons milk, cream and condensed milk..............................	93,033,154

Value of crude milk handled.................	$11,231,377 50
Value of cream handled....................	1,984,782 00
Value of unsweetened condensed milk handled.	333,095 00
Value of crude milk sold to condensers.......	2,790,000 00
Total value	$16,249,354 50

Total value of butter handled................	$21,155,657 00
Total value of cheese handled................	10,068,391 45
Total value of cream, milk and condensed milk handled..............................	16,249,854 50
Total value of dairy products handled during the year........................	$47,475,302 95

The total increase in value of dairy products over value of products handled in 1892 was $1,171,825.93.

The statistics of dairy products handled in New York city in 1893, show, by comparison with 1892, that there has been an increase in the quantity of Eastern butter received in that city of 1,093,540 pounds, seven-eighths of which was produced in this State, and an increase of 2,187,947 gallons of milk, cream and condensed milk; also that there was a material decrease in the receipts of cheese during the same period amounting to 3,653,305 pounds. The following table will show the net increase in value of products handled during the year:

Increase in value of butter in 1893 over 1892..	$563,714 20
Increase in value of milk, cream and condensed milk, same period........................	1,132,585 78
Total	$1,696,299 98
Less decrease in cheese handled..............	401,865 55
Net decrease in 1893 over 1892............	$1,294,416 43

Total value of Eastern products handled in New York city during the year:

Butter....................................	$7,531,615 00
Cheese....................................	9,611,870 95
Crude milk, condensed milk and cream.......	16,249,254 50
Total................................	$33,392,740 45

The following statistics, giving the value of Eastern dairy products handled in New York city for the past four years, show an increase in value, annually; also, that while the value of Eastern products handled has increased over $6,000,000, that the Western products handled has increased only $1,000,000. This enormous increase proves conclusively that the Dairy Laws, and the enforcement of same, has encouraged the farmer to give more attention to dairy farming.

FOR THE YEAR ENDING OCTOBER 31, 1894 (DAIRY PRODUCTS).

The receipts and value of dairy products handled in New York city during the year ending October 31, 1894, were as follows:

BUTTER.

Eastern, 341,705 packages of seventy pounds (average), 23,719,350 pounds, valued at twenty-three cents per pound....................	$5,501,450 50

Western, 1,372,565 packages of fifty pounds (average), 88,628,150 pounds, valued at twenty-one cents per pound	$14,411,911 50
Total pounds, 92,548,500, valued at	$19,913,362 00

CHEESE.

Eastern, 80,671,755 pounds, valued at ten cents per pound	$8,067,175 50
Western, 6,384,550 pounds, valued at nine cents per pound	574,609 50
Total pounds, 87,533,905, valued at	$8,641,785 00

MILK.

	Gallons.
Seven million four hundred seventeen thousand two hundred and fifty-six cans of crude milk, of ten gallons each	74,172,560
Sixty-three thousand three hundred eighty-seven cans of unsweetened condensed milk, of ten gallons each	633,870
Two hundred four thousand three hundred seventy-five cans of cream, of ten gallons each.	2,043,750
There is also produced in the State of New York and sold during the year to condensers, most of which reaches the New York market in condensed form in small cans, a large amount of crude milk, estimated to be not less than	18,000,000
Total gallons milk, cream and condensed milk	94,850,180

Value of crude milk handled	$11,125,884
Value of cream handled	1,885,595
Value of unsweetened condensed milk handled	396,169
Value of crude milk sold to condensers	2,700,000
Total value	$16,107,648

Total value of butter handled	$19,913,362
Total value of cheese handled	8,641,785
Total value of milk, cream and condensed milk handled	16,107,648
Total value of dairy products handled during the year	$44,662,795

The total decrease in value of dairy products handled in New York in 1894, show by comparison with 1895, that there has been a decrease in the quantity of eastern butter received in that city of 6,207,110 pounds and an increase of 1,814,651 gallons of milk; also, that there was a material decrease in the receipts of cheese during the same period, amounting to 6,708,890 pounds.

The following table will show the net decrease in value of product handled during the year:

Decrease in value of butter handled in 1894 compared with 1893	$2,030,164 50
Decrease in value of cheese handled	1,544,695 45
Decrease in value of milk, cream and condensed milk handled same period	141,606 50
Decrease in value of eastern dairy products handled in 1894, compared with 1893	3,716,466 45

Two million eighty-eight thousand five hundred and twenty-nine dollars thirty cents of the decrease in value of dairy products handled during the year is represented by decreased quantity handled and only $1,617,942.15 by lower prices obtained. Notwithstanding the lower prices, dairy products have maintained better value than any other farm product during the past year of depression in business of all kinds.

Total value of eastern dairy products handled in New York city during the year:

Butter	$5,501,450 50
Cheese	8,067,175 50
Crude milk, condensed milk and cream	16,107,648 00
Total	$29,676,274 00

The following statistics giving the value of eastern dairy products handled in New York city for the past four years, show an increase in value annually from 1890 to 1893, and a decrease in 1894; also, that while the value of eastern dairy products handled has increased $2,324,626.75, that the western product handled has increased only $1,910,863.80 during the past five years. This increase proves conclusively that the Dairy Laws, and the enforcement of same has encouraged the farmers to give more attention to dairy farming:

FOR THE YEAR ENDING OCTOBER 31, 1895.

The receipt and value of dairy products handled in New York city during the year ending October 31, 1895, were as follows:

BUTTER.

Eastern, 265,742 packages of 70 pounds (average) 18,601,940 pounds, valued at 20 cents per pound	$3,720,388 00
Western, 1,522,881 packages of 50 pounds (average) 76,144,050 pounds, valued at 19 cents per pound	14,467,369 50
Total, 94,745,990 pounds, valued at	$18,187,757 50

CHEESE.

Eastern, 61,255,620 pounds valued at 9½ cents per pound	$5,819,183 90
Western, 5,977,500 pounds, valued at 8½ cents per pound	508,087 50
Total value	$6,327,271 40

MILK.

	Quarts.
Seven million six hundred and ninety-one thousand and ninety cans condensed milk of forty quarts each	309,643,600
Two hundred and twenty-one thousand three hundred and seventy-six cans of cream of forty quarts each	8,885,040
Seventy-four thousand six hundred and thirty-one cans unsweetened condensed milk of forty quarts each	2,974,440
Total quarts	321,473,080
There is also produced within the State of New York, and sold during the year to condensers, most of which reaches the New York market in condensed form in small cans, a large amount of crude milk estimated to be not less than 1,800,000 cans of forty quarts each	72,000,000
Total quarts of milk, cream and condensed milk	373,473,080

Value of crude milk handled	$11,921,189 50
Value of cream handled	1,777,649 28
Value of unsweetened condensed milk	379,984 71
Value of crude milk sold to condensers	2,700,000 00
Total value	$16,778,823 49
Total value of butter handled	$18,187,757 50
Total value of cheese handled	6,327,271 40
Total value of milk, cream and condensed milk	16,778,823 49
Total value of dairy products handled during the year	$41,293,852 39
Total decrease in value of dairy products handled compared with 1894, was	$3,368,942 61

The statistics of dairy products handled in New York city in 1895, show by comparison with 1894, that there has been a decrease of eastern butter received in that city of 5,317,410 pounds, at an increase of 14,072,260 quarts of milk, cream and condensed milk; also, that there was a material decrease in the receipts of cheese during the same period, amounting to 19,413,135 pounds.

The following table will show the net decrease in value of products handled during the year:

Decrease in value of eastern butter handled in 1895, compared with 1894	$1,781,062 50
Increase in value of eastern cheese handled	2,247,991 60
Increase in value of milk, cream and condensed milk same period	671,175 49
Decrease in value of eastern dairy products handled in 1894, compared with 1895	3,357,878 61

Total value of eastern dairy products handled in New York city during the year:

Butter	$3,720,388 90
Cheese	5,819,183 90
Crude milk, cream and condensed milk	16,788,823 49
Total	$26,318,395 39

FOR THE YEAR ENDING OCTOBER 31, 1896.

The receipts and value of dairy products handled in New York city during the year ending October 31, 1896, were as follows:

BUTTER.

Eastern, 236,309 packages of 70 pounds (average) 16,541,630 pounds, valued at 18 cents per pound	$2,977,493 40
Western, 1,945,017 packages of 50 pounds (average) 96,150,850 pounds, valued at 18 cents per pound	16,345,644 50
Total, 113,692,480 pounds, valued at	$19,323,137 90

CHEESE.

Eastern, 59,133,120 pounds, valued at 9½ cents per pound	$5,617,645 40
Western, 5,588,520 pounds, valued at 8½ cents per pound	475,024 20
Total, 64,721,640 pounds, valued at	$6,092,669 60

MILK.

	Quarts.
Seven million nine hundred and two thousand seven hundred and eighty-two cans of crude milk of forty quarts each	316,111,280
Two hundred and twenty-one thousand four hundred and eighty-six cans of cream of forty quarts each	8,859,440
Eighty thousand one hundred and forty-nine cans of unsweetened condensed milk of forty quarts each	3,205,960
There is also produced within the State of New York and sold during the year to condensers, most of which reaches the New York market in condensed form in small cans, a large amount of crude milk, estimated to be not less than 1,875,000 cans of forty quarts each	75,000,000

Value of crude milk handled	$11,063,894 80
Value of cream handled	1,550,402 00
Value of unsweetened condensed milk	448,834 40
Value of crude milk sold to condensers	2,718,750 20
Total value	$15,781,881 20

Total value of butter handled................	$19,493,137 90
Total value of cheese handled................	6,092,669 60
Total value of milk, cream and condensed milk handled	15,781,881 20
Total value of dairy products handled during the year........................	$41,367,688 70
Total increase of value of dairy products handled compared with 1895......................	$73,836 31

The statistics of dairy products handled in New York city in 1896 show, by comparison with 1895, that there has been a decrease in quantity of eastern butter received in that city of 2,060,310 pounds and an increase of 29,703,600 quarts of milk, cream and condensed milk; also that there was a material decrease in the receipts of cheese during the same period, amounting to 2,511,480 pounds.

The following table will show the net decrease of products handled during the year:

Decrease in value of eastern butter handled in 1896, compared with 1895..................	$374,855 80
Decrease in value of eastern cheese handled....	233,590 60
Decrease in value of milk, cream and condensed milk, same period	996,942 29
Decrease in the value of eastern dairy products handled in 1895, compared with 1896........	1,605,388 69
Total value of eastern dairy products handled in New York city during the year............	24,377,020 00

Butter	$2,977,493 40
Cheese	5,617,645 30
Crude milk, condensed milk and cream........	15,781,881 20
Total	$24,377,020 00

FOR THE YEAR ENDING OCTOBER 31, 1897.

The receipts and value of dairy products handled in New York city during the year ending October 31, 1897, were as follows:

Eastern, 209,808 packages of seventy pounds (average), 14,686,560 pounds, valued at eighteen cents per pound	$2,642,580 80
Western, 1,964,675 packages of fifty pounds (average), 98,233,750 pounds, valued at seventeen cents per pound	16,699,737 50
Total, 112,920,310 pounds, valued at	$19,342,318 30

CHEESE.

Eastern, 66,598,300 pounds, valued at ten cents per pound	$6,659,830 00
Western, 5,699,080 pounds, valued at nine cents per pound	512,917 20
Total, 72,297,380 pounds, valued at	$7,172,747 20

MILK.

	Quarts.
Cans of crude milk of forty quarts each	328,795,480
Cans of cream of forty quarts each	9,331,840
Cans of unsweetened condensed milk of forty quarts each	2,406,920
There is also produced within the State of New York and sold during the year to condensers, most of which reaches the New York market in condensed form in small cans, a large amount of crude milk, estimated to be not less than 1,875,000 cans of forty quarts each	75,000,000

Value of crude milk handled	$11,343,402 66
Value of cream handled	1,609,742 40
Value of unsweetened condensed milk handled	332,154 96
Value of crude milk sold to condensers	2,587,541 40
Total value	$15,872,841 42

Total value of butter handled................	$19,342,318 30
Total value of cheese handled................	7,172,747 20
Total value of milk, cream and condensed milk handled	15,872,841 42
Total value of dairy products handled during the year	$42,387,906 92
Total increase of value dairy products handled compared with 1896.......................	$1,020,218 22

The statistics of dairy products handled in New York city in 1897 show, by comparison with 1896, that there has been a decrease in quantity of eastern butter received in that city of 2,055,070 pounds, and an increase of 11,850,040 quarts of milk, cream and condensed milk; also that there was a material increase in the receipts of cheese during the same period, amounting to 7,575,745 pounds.

The following table will show the total of products handled during the year:

Decrease in value of eastern butter handled in 1897 compared with 1896..................	$334,912 60
Increase in value of eastern cheese handled....	1,042,184 60
Increase in value of milk, cream and condensed milk, same period........................	90,960 22
Increase in value of eastern dairy products handled in 1896 compared with 1897........	798,232 22
Total value of eastern dairy products handled in New York city during the year...........	25,175,252 22

Butter	$2,642,580 80
Cheese	6,659,830 00
Crude milk, cream and condensed milk.........	15,872,841 42
Total	$25,175,252 22

The following statistics, giving the value of eastern dairy products handled in New York city for the past seven years, show an increase in value annually from 1890 to 1893, and a decrease in 1894, 1895, 1896 and 1897.:

Total yearly value of products handled:

Eastern.

1890	$27,351,657 22
1891	29,189,943 10
1892	32,148,404 02
1893	33,392,740 45
1894	29,676,274 00
1895	26,318,395 39
1896	24,377,020 00
1897	25,175,252 22

Western.

1890	$13,075,657 20
1891	15,087,277 50
1892	14,206,083 00
1893	14,080,562 50
1894	14,986,521 00
1895	16,975,456 50
1896	16,990,668 70
1897	16,699,737 50

Exports of Butter and Cheese.

The following statistics, taken from the records of the New York Mercantile Exchange, show the exports of butter and cheese each year since January 1, 1883.

BUTTER.

	Pounds.
From the port of New York, 1883	18,811,400
From the port of New York, 1884	15,865,600
From the port of New York, 1885	14,601,550
From the port of New York, 1886	11,677,750
From the port of New York, 1887	9,933,400

	Pounds.
From the port of New York, 1888..............	7,000,650
From the port of New York, 1889..............	19,941,176
From the port of New York, 1890..............	20,623,534
From the port of New York, 1891..............	11,115,505
From the port of New York, 1892..............	9,083,478
From the port of New York, 1893..............	5,336,449
From the port of New York, 1894..............	8,288,670
From the port of New York, 1895..............	11,133,747
From the port of New York, 1896*.............	18,540,091
From the port of New York, 1897..............	25,757,263
From all ports in the United States, 1883........	22,375,708
From all ports in the United States, 1884........	21,391,196
From all ports in the United States, 1885........	19,593,872
From all ports in the United States, 1886........	14,404,727
From all ports in the United States, 1887........	12,531,171
From all ports in the United States, 1888........	8,749,366
From all ports in the United States, 1889........	25,983,054
From all ports in the United States, 1890........	23,895,914
From all ports in the United States, 1891........	14,970,538
From all ports in the United States, 1892........	11,351,250
From all ports in the United States, 1893........	6,837,289
From all ports in the United States, 1894........	10,231,417
From all ports in the United States, 1895........	13,935,017
From all ports in the United States, 1896*.......	23,335,729
From all ports in the United States, 1897........	35,631,967

These statistics show that there have been 7,217,172 pounds more butter exported from the port of New York than the previous year, also the total exports of butter from all ports were 12,296,238 pounds more.

CHEESE.

	Pounds.
From the port of New York, 1883..............	97,897,850
From the port of New York, 1884..............	96,634,250
From the port of New York, 1885..............	82,934,750

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* Ten months.

	Pounds.
From the port of New York, 1886	78,763,400
From the port of New York, 1887	72,529,500
From the port of New York, 1888	75,840,700
From the port of New York, 1889	75,046,326
From the port of New York, 1890	70,208,270
From the port of New York, 1891	61,299,205
From the port of New York, 1892	67,432,651
From the port of New York, 1893	53,293,060
From the port of New York, 1894	52,903,719
From the port of New York, 1895	30,692,702
From the port of New York, 1896*	25,947,401
From the port of New York, 1897	42,514,776
From all ports in the United States, 1883	111,973,140
From all ports in the United States, 1884	111,950,686
From all ports in the United States, 1885	95,047,243
From all ports in the United States, 1886	86,636,685
From all ports in the United States, 1887	87,069,804
From all ports in the United States, 1888	81,595,304
From all ports in the United States, 1889	98,140,486
From all ports in the United States, 1890	91,014,571
From all ports in the United States, 1891	77,148,794
From all ports in the United States, 1892	81,589,361
From all ports in the United States, 1893	67,925,712
From all ports in the United States, 1894	68,607,186
From all ports in the United States, 1895	40,610,242
From all ports in the United States, 1896*	37,515,798
From all ports in the United States, 1897	61,176,207

The total receipts of cheese in the city of New York during the year ending October 31, 1894, were	87,533,905
Less exports from port of New York, same period	50,375,760
Leaving for home trade	37,158,145

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* Ten months.

	Pounds.
The total receipts of cheese in the city of New York during the year ending October 31, 1895, were	76,233,120
Less export from New York, same period	29,808,368
Leaving for home trade	47,224,752

The total receipts of cheese in the city of New York, during the year ending October 31, 1896, were 64,721,640 pounds, of which 27,631,735 pounds was exported, leaving for home trade, 37,089,905, being 1,135,847 pounds less for our home trade than the previous year.

The total receipts of cheese in the city of New York during the year ending October 31, 1897, were 88,468,380 pounds, of which 42,514,776 pounds were exported, leaving for home trade 45,953,604 pounds, being 8,865,699 pounds more than the previous year for home consumption.

	MONTHLY AVERAGE — BUTTER.						MONTHLY AVERAGE — CHEESE.						
	Extra fresh.	Creamery held.	Extra H. F. tubs.	Best firkins.	Best western Dairy.	Best imitation creamery.	FACTORY.		Large.	White, small.	Large.	Colored, small.
							Fresh.	Held.				
1896.												
October	18 3/4	17 1/2	16 3/4	15	11 1/4	12 1/2	9 1/2	11	9 7/8	10	9 7/8	10 1/8
November	21 2/5	18 3/8	18	15 3/8	12	14 1/4	10 7/10	11 7/10	10 1/4	10	10 1/8	10 1/8
December	22 5/8	18 3/4	18 1/2	15 1/4	....	16 3/8	13 1/8	11 5/8	10 1/2	10 1/4	10 1/2	10 3/8
Average three months	20 11/12	18 5/24	17 3/4	15 5/24	11 5/8	14 3/8	11 13/120	11 53/120	10 5/24	10 1/2	10 1/6	10 5/24
1897.												
January	20	18	15 1/4	14	....	15 1/2	13 3/5	11 1/2	11 1/6	11 1/6	11 1/5	11 1/5
February	20 1/2	17 1/2	17 3/4	14	....	15 1/2	13 1/2	11 3/8	12 1/4	12 3/8	12 1/4	12 2/5
March	19 1/4	17 1/2	17 3/4	13 3/4	....	15 3/8	11 3/4	10 1/8	12 1/4	12 3/4	12 1/4	12 1/4
April	18 1/2	15 4/5	17 7/8	13 1/3	....	15 1/2	12 1/8	11 1/4	10 1/4	10 1/2	10 3/8	10 1/2
May	15 1/3	14	14 1/2	13	....	12 3/4	10 5/8	10 3/8	9 2/5	10	9 1/2	9 7/8
June	15	....	14 1/8	....	....	12 1/5	10 3/8	10	8 1/5	7 5/8	8 1/8	7 7/8
July	15	....	14	....	....	12 1/5	10	10 1/2	7 1/2	7 1/8	7 1/2	7 3/8
August	16 3/4	17 3/4	15 3/8	....	....	12 3/8	10 1/4	11	8 1/4	8 3/4	8 3/8	8 3/4
September	18 1/5	18 1/3	17	....	....	13 7/8	11 5/8	12 1/2	9 1/8	9 3/8	9 1/8	9 1/2
Average, nine months	17 11/15	16 26/35	15 23/24	13 2/3	....	13 11/12	11 17/30	10 23/24	9 1/2	9 26/27	9 13/15	9 8/9

Average for the Year.

Average prices of butter and cheese from October 1, 1896, to October 1, 1897:

BUTTER.		CHEESE.	
Extra Fresh E. Creamery	18⅛	Large White	10
Held Creamery	17⅒	Small White	10
Extra State Dairy H. F. Tubs	15⅛	Large Colored	10
Best State Dairy Fks	14¼	Small Colored	10
Best Western Dairy	11¼		
Best Imitation Creamery	14⅜		
Fresh Factory	10⅛		
Held Factory	11		

EXPORTS.

The exports of oleomargarine from the port of New York, January 1 to November 1, 1892, was 1,955,829 pounds, and during the same period of 1893, 2,943,220 pounds, showing an increase in 1893 over 1892, for the period named, 897,397 pounds.

Exports of oleomargarine for the year ending November 1, 1894, was 4,619,772 pounds, an increase, as compared with 1893, of 1,670,546 pounds.

Exports of oleomargarine for the year ending November 1, 1895, was 8,800,126 pounds, an increase, as compared with 1894, of 4,180,348 pounds.

Exports of oleomargarine for the year ending November 1, 1896, was 3,249,408 pounds, a decrease, as compared with 1895, of 5,550,718 pounds.

Exports of oleomargarine for the year ending November 1, 1897, was 3,039,222 pounds, a decrease, as compared with 1896, of 210,186 pounds.

DETAILED REPORT OF WORK PERFORMED.

Oleomargarine.

The following is a detailed report of the work performed by each employee of this division between September 30, 1896, and October 1, 1897, in prosecuting violators of the law, relating to the sale of oleomargarine:

Wellington C. Patrick, expert, employed in the above service 18 days:

Number of days obtaining evidence	3
Number of days on special duty	8
Number of days inspecting stores and bakeries	5
Number of days visiting hotels, restaurants and boarding-houses	2
Total number of days	18

Number of samples purchased and taken	68
Number of evenings obtaining samples	5
Number of stores and bakeries inspected	283
Number of hotels, restaurants and boarding-houses inspected	30
Estimated number of miles traveled	450

John McGuire, expert, employed in the above service 165 days:

Number of days in court	55
Number of days obtaining evidence	4
Number of days on special duty	5
Number of days inspecting stores and bakeries	80
Number of days visiting hotels, restaurants and boarding-houses	21
Total number of days	165

Number of samples purchased and taken	551
Number of samples delivered to chemists	21
Number of evenings obtaining samples	60
Number of complaints made	19
Number of appearances in cases	156
Number of stores and bakeries inspected	3,410
Number of hotels, restaurants and boarding-houses visited	595
Estimated number of miles traveled	3,324

Charles Sears, expert, employed in the above service 152 days:

Number of days in court	58
Number of days obtaining evidence	8
Number of days on special duty	2
Number of days inspecting stores and bakeries	65
Number of days visiting hotels, restaurants and boarding-houses	19
Total number of days	152

Number of samples purchased and taken	359
Number of samples delivered to chemists	19
Number of evenings obtaining samples	32
Number of complaints made	18
Number of appearances in cases	114
Number of stores and bakeries inspected	3,145
Number of hotels, restaurants and boarding-houses, visited	432
Estimated number of miles traveled	5,370

John T. Norton, expert, employed in the above service 204 days:

Number of days in court	59
Number of days obtaining evidence	12
Number of days on special duty	11
Number of days inspecting stores and bakeries	89
Number of days visiting hotels, restaurants and boarding-houses	33
Total number of days	204

Number of samples purchased and taken	617
Number of samples delivered to chemists	20
Number of evenings obtaining samples	67
Number of complaints made	18
Number of appearances in cases	159
Number of stores and bakeries inspected	2,979
Number of hotels, restaurants and boarding-houses visited	745
Estimated number of miles traveled	4,005

Archibald D. Clark, expert, employed in the above service 156 days:

Number of days in court	49
Number of days obtaining evidence	5
Number of days on special duty	5
Number of days inspecting stores and bakeries	76
Number of days visiting hotels, restaurants and boarding-houses	21
Total number of days	156

Number of samples purchased and taken	580
Number of samples delivered to chemist	13
Number of evenings obtaining samples	58
Number of complaints made	9
Number of appearances in cases	118
Number of stores and bakeries inspected	3,220
Number of hotels, restaurants and boarding-houses visited	618
Estimated number of miles traveled	3,180

Joseph F. Geisler, Ph. C., chemist:

Number of analyses of oleomargarine and butter samples	43
Number of appearances in cases	61
Number of days in court	44

E. G. Love, Ph. C., chemist:

Number of analyses of oleomargarine and butter samples	30
Number of appearances in cases	43
Number of days in court	32

TOTAL OF WORK PERFORMED.

Oleomargarine.

Number of days in court, experts and chemists	297
Number of days obtaining evidence	32
Number of days on special duty	31
Number of days inspecting stores and bakeries	305
Number of days visiting hotels, restaurants and boarding-houses	96
Total number of days	761
Number of samples purchased and taken	2,175
Number of samples delivered to chemists	73
Number of evenings obtaining samples	222
Number of complaints made	64
Number of appearances in cases	651
Number of stores and bakeries inspected	13,037
Number of hotels, restaurants and boarding-houses visited	2,420
Estimated number of miles traveled	16,329
Number of analyses of oleomargarine and butter samples	73
Number of cases prosecuted, criminal	68
Number of civil penalty actions	7
Number of cases disposed of	69
Number of civil penalties imposed	6
Number of convictions	56
Number of acquittals	4
Number of cases dismissed on examination	1
Number of cases defendant absconded, criminal	5
Number of cases absconded, civil	1
Number of cases awaiting trial	6
Number of cases discontinued on account death of agent	2

Prosecutions.

OLEOMARGARINE.

CASE No. 1100.

Justice Harriman's Court, Brooklyn, N. Y.

Warrant issued November 10, 1869; absconded before service of warrant.

Counsel: C. G. Macy.

Witnesses: John T. Norton and E. S. Wilson.

Chemist: J. F. Geisler.

CASE No. 1916.

Centre Street Police Court, New York City.

Warrant issued June 28, 1897; answered to June 29th; held to bail for examination on July 7th; adjourned to July 13th; to August 16th; to August 20th; to September 13th; to September 22d; to September 29th, and held for trial at General Sessions.

Counsel: C. G. Macy.

Witnesses: Arch D. Clark and Charles Sears.

Chemist: E. G. Love.

CASE No. 1170.

Jefferson Market Police Court, New York City.

Warrant issued December 15, 1896; answered to December 15th; held to bail for trial at Special Sessions. Called for trial January 7, 1897; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1427.

Eighth Judicial District Civil Court, New York City.

Summons and complaint served October, 1896; answered to November 14th; adjourned for trial to November 24th; to December 4th; to December 16th; to January 7, 1897; to January 12th; to January 20th; to January 21st, and judgment taken by default for $100 and costs.

Counsel: C. G. Macy.

Witnesses: W. W. Meeteer and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1917.

Jefferson Market Police Court, New York City.

Warrant issued August 17, 1897; answered to August 18th; held in bail for trial at Special Sessions. Called for trial September 23d; pleaded guilty; sentence suspended.

Counsel: Fred E. Crane.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1, SPECIAL.

Justice Harriman's Court, Brooklyn, N. Y.

Warrant issued November 6, 1896; answered to November 7th; held in bail for trial November 10th; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witness: E. S. Wilson.

Chemist: J. F. Geisler.

CASE No. 1401.

Essex Market Police Court, New York City.

Warrant issued August 10, 1897; answered to August 11th; held to bail for trial at Special Sessions. Called for pleading

September 23d; adjourned to September 30th; pleaded guilty and fined $25.

Counsel: Fred E. Crane.

Witnesses: John T. Norton and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1918.

Jefferson Market Police Court, New York City.

Warrant issued August 17, 1897; answered to August 18th; adjourned for examination to September 7th; examination held September 7th, and discharged.

Counsel: Fred E. Crane.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1000, SPECIAL.

Jefferson Market Police Court, New York City.

Warrant issued June 8, 1897; answered to June 9th; held in bail for trial at Special Sessions. Called for pleading June 17th; adjourned to July 8th, and case transferred to General Sessions; before grand jury not indicted; civil penalty action commenced in Supreme Court.

Counsel: George C. Austin.

Witnesses: John T. Norton and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1982.

Centre Street Police Court, New York City.

Warrant issued August 11, 1897; answered to August 12th; held to bail for trial at Special Sessions. Called for pleading September 9th; adjourned to September 23d; pleaded guilty; fined $25.

Counsel: Fred E. Crane.

Witnesses: John T. Norton and Charles Sears.

Chemist: J. F. Geisler.

CASE No. 1976.

Justice Brenner's Court, Brooklyn, N. Y.

Warrant issued August 17, 1897; answered to August 19th; adjourned for trial to September 3d; to September 10th; to September 14th; to September 24th; to October 8th.

Counsel: George C. Austin.

Witnesses: John McGuire and John T. Norton.

Chemist: E. G. Love.

CASE No. 1994.

Justice Lemmon's Court, Brooklyn, N. Y.

Warrant issued August 19, 1897; answered to August 20th; held to bail for trial at Special Sessions. Called for trial September 1st; adjourned to September 8th; pleaded guilty; fined $25.

Counsel: Benjamin Estes.

Witnesses: John McGuire, John T. Norton and Arch D. Clark.

Chemist: E. G. Love

CASE No. 1993.

Jefferson Market Police Court, New York City.

Warrant issued June 2, 1897; answered to June 4th; held to bail for trial at Special Sessions; before grand jury June 14th.

Counsel: Benjamin Estes.

Witnesses: Arch D. Clark and Charles Sears.

Chemist: J. F. Geisler.

CASE No. 1972.

Yorkville Police Court, New York City.

Warrant issued July 8, 1897; not found by officer; had sold out his business and moved away.

Counsel: George C. Austin.

Witnesses: Arch D. Clark, John McGuire and John T. Norton.

Chemist: J. F. Geisler

CASE No 1975.

First Judicial District Civil Court, New York City.

Civil penalty action; summons and complaint served September 27, 1897.

Counsel: Benjamin Estes.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1447.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued April 19, 1897; answered to April 21st; pleaded guilty; fined $25.

Counsel: A. R. Moore.

Witnesses: Milton T. Morgan, John T. Norton and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1977.

Essex Market Police Court, New York City.

Warrant issued June 5, 1897; answered to June 8th; held to bail for trial at Special Sessions. Called for pleading July 1st; adjourned for trial to July 8th; pleaded guilty; fined $25.

Counsel: C. J. Macy.

Witnesses: John T. Norton, John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1979.

Jefferson Market Police Court, New York City.

Summons issued the 8th day of June, 1897; answered to June 30th, and paroled for trial at Special Sessions. Called for trial September 14th; adjourned to September 22d; to September 29th; pleaded guilty; fined $25.

Counsel: George C. Austin.

Witnesses: John T. Norton, John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1448.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued April 19, 1897; answered to April 21st; pleaded guilty; fined $25.

Counsel: A. R. Moore.

Witnesses: John T. Norton and John McGuire.

Chemist: E. G. Love.

CASE No. 1973.

Justice Worth's Court, Brooklyn, N. Y.

Warrant issued April 29, 1897; answered to May 3d; pleaded guilty; fined $25.

Counsel: W. B. Waite, Jr.

Witnesses: John T. Norton and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1992.

Jefferson Market Police Court, New York City.

Warrant issued June 7, 1897; answered to June 8th; held to bail for trial at Special Sessions. Called for pleading June 17th; adjourned to June 24th; to July 1st; tried; convicted; sentence suspended.

Counsel: Benjamin Estes.

Witnesses: Charles Sears and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1516.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued April 19, 1897; answered to April 21st; pleaded guilty; fined $25.

Counsel: A. R. Moore.

Witnesses: John T. Norton and Charles Sears.

Chemist: J. F. Geisler.

CASE No. 1451.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued April 19, 1897; answered to April 21st; pleaded guilty; fined $25.

Counsel: A. R. Moore.

Witnesses: John McGuire and John T. Norton.

Chemist: E. G. Love.

CASE No. 1363.

Justice Brenner's Court, Brooklyn, N. Y.

Warrant issued May 4, 1897; answered to May 5th; held to bail for trial at Special Sessions. Called for trial May 12th; pleaded guilty; fined $25.

Counsel: W. B. Waite, Jr.

Witnesses: John McGuire and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1385.

Jefferson Market Police Court, New York City.

Warrant issued May 7, 1897; answered to May 8th; held to bail for trial at Special Sessions. Called for trial May 13th; pleaded guilty; adjourned for sentence to May 20th; case called May 20th; fined $150.

Counsel: Benjamin Estes.

Witnesses: John McGuire and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1392.

Essex Market Police Court, New York City.

Warrant issued June 4, 1897. Not found by officer, sold out, moved away.

Counsel: Benjamin Estes.

Witnesses: John McGuire and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1394.

Jefferson Market Police Court, New York City.

Warrant issued May 18, 1897; answerel to May 19th; held to bail for trial at Special Sessions. Called for pleading May 27th; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: John McGuire and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1970.

Essex Market Police Court, New York City.

Warrant issued June 4, 1897; answered to June 5th; adjourned to June 9th for examination; held to bail for trial at Special Sessions. Called for pleading June 17th; adjourned for trial to June 24th; to July 1st; to October 25th; to November 4th; to November 8th, and tried; convicted; sentence suspended.

Counsel: C. G. Macy.

Witnesses: John McGuire and Charles Sears.

Chemist: J. F. Geisler.

CASE No. 1388.

Jefferson Market Police Court, New York City.

Warrant issued May 18, 1897; answered to May 19th; held to bail for trial at Special Sessions. Called for pleading May 27th; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: John McGuire, John T. Norton and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1444.

Jefferson Market Police Court, New York City.

Warrant issued May 5, 1897; answered to May 7th; held to bail for trial at Special Sessions. Called for pleading May 13th; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: Charles Sears and John T. Norton.

Chemist: E. G. Love.

CASE No. 1375.

Centre Street Police Court, New York City.

Warrant issued April 30, 1897; answered to May 3d; adjourned to May 4th; held to bail for trial at Special Sessions. Called for trial May 13th; pleaded guilty; fined $25.

Counsel: Benjamin Estes.

Witnesses: John McGuire, John T. Norton and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1379.

Essex Market Police Court, New York City.

Warrant issued May 3, 1897; answered to May 3d; held to bail for trial at Special Sessions. Called for pleading May 15th; adjourned to May 20th; to May 27th; to June 3d; pleaded guilty; sentence suspended.

Counsel: C. G. Macy.

Witnesses: John T. Norton, John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1866.

Justice Duffy's Court, Long Island City, N. Y.

Warrant issued June 10, 1897; answered to June 11th; adjourned to June 14th; pleaded guilty; fined $25.

Counsel: Benj. Estes.

Witnesses: E. S. Wilson and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1865.

Justice Bristow's Court, Brooklyn, N. Y.

Warrant issued May 7, 1897; answered to May 11th; pleaded guilty; fined $25.

Counsel: Benj. Estes.

Witnesses: John T. Norton, John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1443.

Yorkville Police Court, New York City.

Warrant issued April 26, 1897; answered to April 27th; held to bail for trial at Special Sessions. Called for pleading May 16th; adjourned to May 13th; pleaded guilty; fined $25.

Counsel: Fred A. Ware.

Witnesses: Chas. Sears and John McGuire.

Chemist: E. G. Love.

CASE No. 1863.

Jefferson Market Police Court, New York City.

Warrant issued April 30, 1897; answered to May 4th; held to bail for trial at Special Sessions. Called for pleading May 13th; pleaded guilty; fined $25.

Counsel: Fred A. Ware.

Witnesses: Charles Sears and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1864.

Jefferson Market Police Court, New York City.

Warrant issued June 2, 1897; answered to June 4th; held to bail for trial at Special Sessions. Called for pleading June 7th; adjourned to June 14; to June 17th; adjourned for trial to June 24th; to July 1st; tried, convicted, sentence suspended.

Counsel: Benjamin Estes.

Witnesses: Arch D. Clark, John McGuire and John T. Norton.

Chemist: E. G. Love.

CASE No. 1393.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued April 28, 1897; answered to April 29th; pleaded guilty; fined $25.

Counsel: Fred A. Ware.

Witnesses: Charles Sears and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1442.

Yorkville Police Court, New York City.

Warrant issued May 5, 1897; answered to May 13th; adjourned for examination to May 14th; held to bail for trial at Special Sessions. Called for pleading June 7th; adjourned to June 17th for trial; tried, convicted, sentence suspended.

Counsel: C. G. Macy.

Witnesses: John T. Norton and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1389.

Justice Walsh's Court, Brooklyn, N. Y.

Warrant issued March 17, 1897; answered to March 18th; adjourned for trial to March 25th; tried and decision reserved; April 8th, convicted; fined $25.

Counsel: C. G. Macy.

Witnesses: Charles Sears, John Hart and E. A. Wilson.

Chemist: J. F. Geisler.

CASE No. 1391.

Essex Market Police Court, New York City.

Warrant issued January 29, 1897; answered to January 30th; held to bail for trial at Special Sessions. Called to pleading February 3d; adjourned to February 11th; to February 18th; to March 4th; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: E. S. Wilson and M. T. Morgan.

Chemist: Charles M. Stillwell.

CASE No. 1440.

Civil penalty action.

Supreme Court, Kings County, N. Y.

Action commenced January 22, 1897; returnable February 11th; April 3d, action discontinued; paid penalty of $50.

Counsel: C. G. Macy.

Witnesses: John T. Norton and R. G. Tucker.

Chemist: E. G. Love.

CASE No. 1396.

Centre Street Police Court, New York City.

Warrant issued January 22, 1897; answered to January 25th; adjourned for examination to January 26th; held to bail for trial at Special Sessions. Called for pleading February 18th; adjourned to March 4th; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: E. S. Wilson and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 1403.

Essex Market Police Court, New York City.

Warrant issued January 29, 1897; answered to January 30th; held to bail for trial at Special Sessions. Called for pleading February 3d; adjourned to February 11th; to February 18th; to March 4th; tried; convicted; fined $25.

Counsel: C. G. Macy.

Witnesses: E. S. Wilson and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 1377.

Justice Worth's Court, Brooklyn, N. Y.

Warrant issued May 18, 1897; answered to May 19th; held to bail for trial at Special Sessions. Called for trial June 2d; pleaded guilty; fined $25.

Counsel: Benjamin Estes.

Witnesses: John McGuire and E. S. Wilson.

Chemist: E. G. Love.

CASE No. 1376.

Justice Walsh's Court, Brooklyn, N. Y.

Warrant issued February 3, 1897; answered to February 5th; adjourned to February 8th; pleaded guilty; fined $25.

Counsel: Benjamin Estes.

Witnesses: E. S. Wilson, Arch D. Clark and John T. Norton.

Chemist: J. F. Geisler.

CASE No 1402.

Civil penalty action.

Supreme Court, Kings County, N. Y.

Action commenced January 22, 1897; answered to February 11th, and discontinued on April 3d. Paid penalty of $50.

Counsel: C. G. Macy.

Witnesses: John McGuire, M. T. Morgan and E. S. Wilson.

Chemist: J. F. Geisler.

CASE No. 1395.

Justice Worth's Court, Brooklyn, N. Y.

Warrant issued May 18, 1897; answered to May 19th; adjourned for trial to June 2d; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: John McGuire, M. T. Morgan and E. S. Wilson.

Chemist: E. G. Love.

CASE No. 1436.

Jefferson Market Police Court, New York City.

Warrant issued December 15, 1896; answered to December 15th; adjourned to December 16th for examination; held to bail for trial at Special Sessions. Called for trial January 7, 1897; adjourned to January 14th; pleaded guilty; fined $25.

Counsel: A. Mathews.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1171.

Justice Teale's Court, Brooklyn, N. Y.

Warrant issued May 4, 1897; answered to May 7th; held to bail for trial at Special Sessions. Called for trial May 15th; adjourned to May 29th; to June 19th; to June 29th; tried by jury; acquitted.

Counsel: Benjamin Estes.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1439.

Morrisania Police Court, New York City.

Warrant issued December 22, 1896; answered to December 23d; held to bail for trial at Special Sessions. Called for trial January 14, 1897; tried and acquitted.

Counsel: A. Mathews.

Witnesses: John T. Norton and George A. Smith.

Chemist: E. G. Love.

CASE No. 1437.

Essex Market Police Court, New York City.

Warrant issued December 15, 1896; answered to December 18th; held to bail for trial at Special Sessions. Called for trial January 27, 1897; adjourned to February 10; pleaded guilty; fined $25.

Counsel: A. Mathews.

Witnesses: John T. Norton and George A. Smith.

Chemist: E. G. Love.

CASE No. 1390.

Yorkville Police Court, New York City.

Warrant issued May 25, 1897. Sold out business; could not be found by officer.

Counsel: C. G. Macy.

Witnesses: Arch D. Clark, John T. Norton and John McGuire.

Chemist: E. G. Love.

CASE No. 1378.

Justice Bristow's Court, Brooklyn, N. Y.

Warrant issued May 7, 1897; answered to May 11th; adjourned to May 14th; to May 22d; pleaded guilty; fined $25.

Counsel: Benjamin Estes.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1353.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued February 16, 1897; answered to February 17th; adjourned to February 19th; pleaded guilty; fined $25.

Counsel: Benjamin Estes.

Witnesses: E. S. Wilson, John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1079.

Justice Teale's Court, Brooklyn, N. Y.

Warrant issued May 4, 1897; answered to May 7th; held to bail for trial at Special Sessions. Called for trial May 8th; pleaded guilty; fined $25.

Counsel: Benjamin Estes.

Witnesses: Arch D. Clark and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1357.

Civil penalty action.

Supreme Court, New York City.

Summons and complaint served February 26, 1897; returnable March 16th; time to answer extended; case settled July 14th; penalty paid, $50.

Counsel: Benjamin Estes.

Witnesses: John T. Norton, John McGuire and Fred H. Kracke.

Chemist: E. G. Love.

CASE No. 1362.

Civil penalty action.

Supreme Court, New York City.

Summons and complaint served February 26, 1897; answered to March 16th; time extended until July 14th; case settled; penalty paid, $50.

Counsel: Benjamin Estes.

Witnesses: John McGuire, John T. Norton and Fred H. Kracke.

Chemist: E. G. Love.

CASE No. 1518.

Jefferson Market Police Court, New York City.

Warrant issued September 13, 1897; answered to September 14th; held to bail for trial at Special Sessions. Called for pleading September 23d; adjourned to September 30th; pleaded guilty; sentence suspended.

Counsel: C. G. Macy.

Witnesses: John McGuire and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1966.

Jefferson Market Police Court, New York City.

Warrant issued September 13, 1897; answered to September 14th; held to bail for trial at Special Sessions. Called for pleading September 23d; adjourned to September 30th; pleaded guilty; sentence suspended.

Counsel: C. G. Macy.

Witnesses: John McGuire and Fred H. Kracke.

Chemist: E. G. Love.

CASE No. 1991.

Jefferson Market Police Court, New York City.

Warrant issued June 21, 1897; warrant not served; had moved to New Jersey.

Counsel: Benjamin Estes.

Witnesses: Charles Sears and John McGuire.

Chemist: E. G. Love.

SPECIAL CASE.

Civil penalty action for six violations.

Supreme Court, New York City.

Summons and complaint served June 7, 1897; returnable June 28th; action discontinued on July 7th, on payment of civil penalty in six cases, $600.

Counsel: C. G. Macy.

CASE No. 1971.

Jefferson Market Police Court, New York City.

Warrant issued May 11, 1897; answered to May 12th; adjourned for examination to May 20th; held to bail for trial at Special Sessions. Called for pleading May 27th; adjourned to June 3d; to June 17th, and case transferred to General Sessions; before grand jury, July 7th.

Counsel: Benjamin Estes.

Witnesses: Charles Sears and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1990.

Jefferson Market Police Court, New York City.

Warrant issued June 21, 1897; absconded before the warrant was served.

Counsel: George C. Austin.

Witnesses: Charles Sears and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1435.

Jefferson Market Police Court, New York City.

Warrant issued December 7, 1896; answered to December 8th; held to bail for trial at Special Sessions. Called for trial January 7, 1897; pleaded guilty; fined $25.

Counsel: C. G. Macy.

Witnesses: E. S. Wilson and Arch D. Clark.

Chemist: J. F. Geisler.

Detailed Report of Work Performed.

MILK.

The following tables give a detailed report of work performed by each employee in this division of the Department, between September 30, 1896, and October 1, 1897, in enforcing the laws relating to the sale of adulterated milk:

John McGuire, expert, employed in the above service 40 days:

Number of days in court	10
Number of days obtaining evidence	1
Number of days inspecting milk	27
Number of days on special duty	2
Total number of days	40

Number of stores, milk inspected	2,215
Number of cans, milk inspected	3,405
Number of dairies and creameries, milk inspected on delivery from railroads and steamboats	770
Number of cans inspected	6,800
Number of peddlers' milk inspected	160
Number of cans inspected	1,012
Total cans, milk inspected	11,217

Total number of samples delivered to chemists	4
Total number of complaints made	4
Total number appearances in cases	46
Estimated number of miles traveled	1,340

Archibald D. Clark, expert, employed in the above service 42 days:

Number of days in court	10
Number of days obtaining evidence	2
Number of days inspecting milk	26
Number of days on special duty	2
Number of days inspecting herds	2
Total number of days	42

Number of stores, milk inspected	1,985
Number of cans, milk inspected	3,370
Number of dairies and creameries, milk inspected on delivery from railroads and steamboats	773
Number of cans inspected	6,785
Number of peddlers' milk inspected	187
Number of cans inspected	1,130
Total cans of milk inspected	11,285

Number of stables inspected	14
Number of cows inspected	310
Total number of samples delivered to chemists	5
Total number of complaints made	5
Total number of appearances in cases	47
Estimated number of miles traveled	1,270

John T. Norton, expert, employed in the above service 75 days:

Number of days in court	15
Number of days obtaining evidence	4
Number of days inspecting milk	45
Number of days on special duty	6
Number of days inspecting herds	8
Total number of days	78

Number of stores, milk inspected	1,930
Number of cans, milk inspected	3,045
Number of dairies and creameries, milk inspected on delivery from railroads and steamboats	665
Number of cans inspected	6,879
Number of peddlers' milk inspected	183
Number of cans inspected	1,125
Total cans, milk inspected	11,049

Number of inspection of stables	35
Number of cows inspected	637
Total number of samples delivered to chemists	13
Total number of complaints made	12
Total number of appearances in cases	61
Estimated number of miles traveled	1,960

Charles Sears, expert, employed in the above service 98 days:

Number of days in court	26
Number of days obtaining evidence	2
Number of days inspecting milk	60
Number of days inspecting herds	10
Total number of days	98

Number of stores, milk inspected	2,085
Number of cans, milk inspected	3,466
Number of dairies and creameries, milk inspected on delivery from railroads and steamboats	1,373
Number of cans inspected	11,495
Number of peddlers' milk inspected	328
Number of cans inspected	3,055
Total number of cans, milk inspected	18,016

Number of inspections of stables	62
Number of cows inspected	1,495
Total number of samples delivered to chemists	23
Total number of complaints made	19
Total number of appearances in cases	65
Estimated number of miles traveled	4,972

Wellington C. Patrick, expert, employed in the above service 16 days:

Number of days obtaining evidence	4
Number of days inspecting milk	10
Number of days on special duty	2
Total number of days	16

Number of stores, milk inspected	301
Number of cans, milk inspected	1,109
Number of dairies and creameries, milk inspected on delivery from railroads and steamboats	581

Number of cans inspected	4,421
Number of peddlers' milk inspected	30
Number of cans inspected	166
Total cans of milk inspected	5,696

Total number of samples delivered to chemists	2
Total number of complaints made	2
Estimated number of miles traveled	390

Joseph F. Geisler, Ph. C., chemist:

Number of analyses of milk samples	22
Number of appearances in cases	23
Number of days in court	15

Edward S. Love, Ph. C., chemist:

Number of analyses of milk samples	13
Number of appearances in cases	19
Number of days in court	12

TOTAL MILK.

Number of days in court, experts and chemists	88
Number of days obtaining evidence	13
Number of days inspecting milk	168
Number of days on special duty	10
Number of days inspecting herds	20
Total number of days	299

Number of stores, milk inspected	8,511
Number of cans inspected	14,395
Number of peddlers' milk inspected	888
Number of cans inspected	6,488
Number of dairies and creameries, milk inspected on delivery from railroads and steamboats	4,162
Number of cans inspected	36,380
Total cans inspected	57,263

Number of inspections of stables	111
Number of cows inspected	2,442
Number of samples delivered to chemists	47
Number of complaints made	42
Number of appearances in cases	261
Estimated number of miles traveled	9,932
Number of analyses of samples of milk	47
Number of cases prosecuted, criminal	20
Number of civil penalty actions	19
Number of cases discontinued on account of death of agent	3
Number of cases dismissed on examination	3
Number of civil penalties imposed	10
Number of acquittals	8
Number of cases awaiting trial	12
Number of cases disposed of	27

Prosecutions.

MILK.

CASE No. 4651.

Justice Worth's Court, Brooklyn, N. Y.

Warrant issued August 17, 1897; answered to August 19th; pleaded guilty; fined $25.

Counsel: Fred C. Crane.

Witnesses: Charles Sears and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 4656.

Essex Market Police Court, New York City.

Warrant issued August 16, 1897; answered to August 17th; adjourned to August 20th; held to bail for trial at Special Sessions. Called for pleading August 26th, and case transferred to General Sessions.

Counsel: Fred C. Crane.

Witnesses: John T. Norton and Charles Sears.

Chemist: J. F. Geisler.

CASE No. 4666.

Civil penalty action.

Supreme Court, Brooklyn, N. Y.

Summons and complaint served September 8, 1897; returnable September 28th. Case settled on September 20th by paying civil penalty of $100.

Counsel: Henry M. Heyman.

Witnesses: Charles Sears and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 4664.

Civil penalty action.

Supreme Court, New York City.

Summons and complaint served August 31, 1897. Case settled by payment of civil penalty of $100.

Counsel: A. R. Moore.

Witnesses: Charles Sears and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1926.

Civil penalty action.

Supreme Court, Kings County, New York.

Summons and complaint issued January 29, 1897, returnable February 6th; discontinued by payment of civil penalty of $100.

Counsel: Benjamin Estes.

Witnesses: W. W. Meeteer and W. S. Wilson.

Chemist: E. G. Love.

CASE No. 1987.

Morrissania Police Court, New York City.

Warrant issued November 26, 1896; answered to November 27th; held to bail for trial at Special Sessions. Called for pleading

December 3rd; adjourned to December 10th; to January 6, 1897; to January 21st; to January 27th, and tried and acquitted.

Counsel: Fred A. Ware.

Witnesses: E. S. Wilson and John T. Norton.

Chemist: Charles M. Stillwell.

CASE No. 4674.

Yorkville Police Court, New York City.

Warrant issued August 31, 1897; answered to September 1st; held to bail for trial at Special Sessions. Called for pleading September 23d; adjourned to September 30th; tried; convicted, and fined $25.

Counsel: C. G. Macy.

Witnesses: John T. Norton and John McGuire.

Chemist: E. G. Love.

CASE No. 4688.

Harlem Police Court, New York City.

Warrant issued August 30, 1897; answered to September 1st; adjourned to September 3d; adjourned to September 4th; held to bail for trial at Special Sessions. Called for pleading September 9th; pleaded guilty; fined $50.

Counsel: C. G. Macy.

Witnesses: John T. Norton and John McGuire.

Chemist: J. F. Geisler.

CASE No. 4680.

Yorkville Police Court, New York City.

Warrant issued September 14, 1897; answered to September 15th; adjourned to September 16th; to September 23d, and after examination was discharged.

Counsel: C. G. Macy.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 4675.

First District Civil Court, New York City.

Summons and complaint served September 17, 1897; returnable October 7th.

Counsel: C. G. Macy.

Witnesses: John McGuire and John T. Norton.

Chemist: E. G. Love.

CASE No. 4685.

Morrisania Police Court, New York City.

Warrant issued September 27, 1897; answered to September 28th; held to bail for trial at Special Sessions.

Counsel: C. G. Macy.

Witnesses: Arch D. Clark and Charles Sears.

Chemist: J. F. Geisler.

CASE No. 4660.

Civil penalty action.

Supreme Court, New York County, N. Y.

Action commenced September 25, 1897; discontinued by payment of civil penalty of $100.

Counsel: C. G. Macy.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 4669.

Yorkville Police Court, New York City.

Warrant issued September 3 ,1897; answered to September 7th; examination held and adjourned to September 14th for decision. Case called September 14th and dismissed.

Counsel: C. G. Macy.

Witnesses: Arch D. Clark and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 4683.

Yorkville Police Court, New York City.

Warrant issued September 3, 1897; answered to September 7th; held to bail for trial at Special Sessions. Called for pleading September 16th, and case transferred to General Sessions.

Counsel: C. G. Macy.

Witnesses: Arch D. Clark and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 4611.

Civil penalty action.

Supreme Court, New York County, N. Y.

Action commenced September 25, 1897; discontinued September 25th, on payment of civil penalty of $100.

Counsel: W. J. Griffin.

Witnesses: W. C. Patrick and John T. Norton.

Chemist: E. G. Love.

CASE No. 4671.

Civil penalty action.

Supreme Court, New York County, N. Y.

Action commenced September 9, 1897; discontinued by payment of civil penalty of $100.

Counsel: C. G. Macy.

Witnesses: Charles Sears and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 4661.

Yorkville Police Court, New York City.

Warrant issued August 31, 1897; answered to September 1st; held to bail for trial at Special Sessions. Called for pleading

September 23d; adjourned to September 30th, and case transferred to General Sessions.

Counsel: C. G. Macy.

Witnesses: John T. Norton and Charles Sears.

Chemist: E. G. Love.

CASE No. 4670.

Civil penalty action.

Supreme Court, Kings County, N. Y.

Summons and complaint issued September 10, 1897; answered to September 30th; placed on calendar and awaiting trial.

Counsel: Henry M. Heyman.

Witnesses: Charles Sears and John McGuire.

Chemist: E. G. Love.

CASE No. 4668.

Supreme Court, Kings County, N. Y.

Action commenced by service of summons, September 30, 1897; returnable October 20, 1897. Case discontinued September 30th; penalty paid, $50.

Counsel: H. M. Heyman.

Witnesses: John McGuire and John T. Norton.

Chemist: E. G. Love.

CASE No. 4679.

Yorkville Police Court, New York City.

Warrant issued September 3, 1897; answered to September 7th, and on examination was discharged. Civil penalty action commenced.

Counsel: C. G. Macy.

Witnesses: John T. Norton and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 4679.

Civil penalty action.

District Civil Court, New York City.

Action commenced September 10, 1897; case discontinued in September; penalty paid, $40.

Counsel: C. G. Macy.

Witnesses: John T. Norton and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 4669.

Civil penalty action.

District Civil Court, New York City.

Action commenced September 28, 1897, by service of summons and complaint.

Counsel: C. G. Macy.

Witnesses: Arch D. Clark and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 4684.

Civil penalty action.

Supreme Court, Brooklyn, N. Y.

Action commenced September 28, 1897; returnable October 18th.

Counsel: A. R. Moore.

Witnesses: John T. Norton and W. C. Patrick.

Chemist: J. F. Geisler.

CASE No. 4652.

Civil penalty action.

Supreme Court, Queens County, N. Y.

Action commenced September 30, 1897; returnable October 20th.

Counsel: A. R. Moore.

Witnesses: John T. Norton and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 4665.

Civil penalty action.

Supreme Court, New York City.

Action commenced September 27, 1897; returnable October 15th.

Counsel: A. R. Moore.

Witnesses: Charles Sears and John McGuire.

Chemist: J. F. Geisler.

Detailed Report of Work Performed.

VINEGAR.

The following tables give a detailed report of work performed by each employee in this division of the Department between September 30, 1896, and October 1, 1897, in enforcing the laws relating to the sale of adulterated vinegar:

Archibald D. Clark, expert, employed in the above service 106 days:

Number of days in court	35
Number of days obtaining evidence	3
Number of days on special duty	2
Number of days inspecting stores	60
Number of days inspecting wholesale stores and manufactories	6
Total number of days	106

Number of samples purchased and taken	27
Number of samples delivered to chemist	27
Number of appearances in cases	109
Number of complaints made	24
Number of wholesale stores and manufactories inspected	67
Number of barrels and casks of vinegar inspected	1,478
Number of retail stores inspected	2,635

Number of barrels and kegs of vinegar inspected	3,486
Total number of inspections	4,964
Estimated number of miles traveled	2,645

John McGuire, expert, employed in the above service 99 days:

Number of days in court	35
Number of days obtaining evidence	2
Number of days on special duty	2
Number of days inspecting stores	54
Number of days inspecting wholesale stores and manufactories	6
Total number of days	99

Number of samples purchased and taken	28
Number of samples delivered to chemist	27
Number of appearances in cases	138
Number of complaints made	25
Number of wholesale stores and manufactories inspected	70
Number of barrels and casks of vinegar inspected	1,530
Number of retail stores inspected	2,415
Number of barrels and kegs of vinegar inspected	3,107
Total number of inspections made	4,637
Estimated number of miles traveled	2,426

John T. Norton, expert, employed in the above service 22 days:

Number of days in court	8
Number of days obtaining evidence	2
Number of days inspecting stores	5
Number of days inspecting wholesale stores and manufactories	7
Total number of days	22

Number of samples purchased and taken	9
Number of samples delivered to chemist	9
Number of appearances in cases	66
Number of complaints made	9
Number of wholesale stores and manufactories inspected	19
Number of barrels and kegs of vinegar inspected	554
Number of barrels and casks of vinegar inspected	468
Number of retail stores inspected	327
Total number of barrels and kegs of vinegar inspected	1,022
Estimated number of miles traveled	2,757

Charles Sears, expert, employed in the above service 54 days:

Number of days in court	22
Number of days obtaining evidence	4
Number of days inspecting stores	25
Number of days inspecting wholesale stores and manufactories	3
Total number of days	54

Number of samples purchased and taken	15
Number of samples delivered to chemist	15
Number of appearances in cases	61
Number of complaints made	14
Number of wholesale stores and manufactories inspected	28
Number of barrels and kegs of vinegar inspected	2,111
Total number of inspections	2,681
Estimated number of miles traveled	2,265

Wellington C. Patrick, expert, employed in the above service 7 days:

Number of days inspecting stores	6
Number of days inspecting wholesale stores and manufactories	1
Total number of days	7

Number of samples purchased and taken	1
Number of samples delivered to chemist	1
Number of complaints made	1
Number of wholesale stores and manufactories inspected	1
Number of barrels and casks of vinegar inspected	75
Number of retail stores inspected	229
Number of barrels and kegs of vinegar inspected	355
Total number of inspections	430
Estimated number of miles traveled	175

Joseph F. Geisler, Ph. C., chemist:

Number of analyses of vinegar samples	37
Number of appearances in cases	41
Number of days in court	28

Edward G. Love, Ph. C., chemist:

Number of analyses of vinegar samples	39
Number of appearances in cases	50
Number of days in court	33

Total of Work Performed.

VINEGAR.

Number of days in court, experts and chemists	161
Number of days obtaining evidence	11
Number of days on special duty	4
Number of days inspecting retail stores	150
Number of days inspecting wholesale stores and manufactories	23
Total number of days	349

Number of wholesale stores and manufactories inspected	122
Number of barrels and casks of vinegar inspected	3,721
Number of retail stores, vinegar inspected	7,034

Number of barrels and kegs of vinegar inspected	9,613
Total number of vinegar inspections	13,734
Number of samples purchased and taken	80
Number of samples delivered to chemist	79
Number of complaints made	74
Number of appearances in cases	475
Estimated number of miles traveled	11,268
Number of analyses of samples of vinegar	79
Number of cases prosecuted	74
Number of cases dismissed on examination	3
Number of cases defendant absconded	3
Number of convictions	31
Number of acquittals	8
Number of cases awaiting trial	29
Number of cases disposed of	45

Prosecutions.

VINEGAR.

CASE No. 1043.

Civil penalty action.

Supreme Court, Suffolk County, N. Y.

Summons and complaint served November 2, 1896; answered to November 18th, and placed on calendar for trial. Called for trial March 5, 1897; tried, verdict for defendant.

Counsel: Benj. Estes.

Witnesses: E. S. Wilson and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1067.

Civil penalty action.

Supreme Court, New York City.

Summons and complaint served September 30, 1897; returnable October 20th.

Counsel: Henry M. Heyman.

Witnesses: Arch. D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1077.

Civil penalty action.

Supreme Court, Suffolk County, N. Y.

Summons and complaint served September 21, 1897, and penalty paid, $50.

Counsel: C. G. Macy.

Witnesses: Arch. D. Clark and W. C. Patrick.

Chemist: E. G. Love.

CASE No. 1074.

Civil penalty action.

Supreme Court, Suffolk County, N. Y.

Summons and complaint served September 21, 1897, and penalty paid, $50.

Counsel: C. G. Macy.

Witnesses: W. C. Patrick and Arch. D. Clark.

Chemist: E. G. Love.

CASE No. 1370.

Essex Market Police Court, New York City.

Warrant issued May 25, 1897; returnable May 28th. Not found by officer; sold out and skipped.

Counsel: Robert Mazet.

Witnesses: John T. Norton and Charles Sears.

Chemist: E. G. Love.

CASE No. 1369.

Centre Street Police Court, New York City.

Warrant issued May 25, 1897; answered to May 28th; adjourned to June 15th; and held to bail for trial at Special Sessions. Called for pleading June 24th; adjourned to July 1st, tried and acquitted.

Civil action begun in District Court; recovered the penalty of $100.

Counsel: Robert Mazet.

Witnesses: John T. Norton, John McGuire and Arch. D. Clark.

Chemist: E. G. Love.

CASE No. 1373.

Justice Bristow's Court, Brooklyn, N. Y.

Warrant issued May 25, 1897; answered to May 26th; held to bail for trial on June 2d; adjourned to June 7th; to June 15th. Pleaded guilty; sentence suspended.

Counsel: Fred A. Ware.

Witnesses: Charles Sears and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 1059.

Essex Market Police Court, New York City.

Warrant issued May 25, 1897; answered to May 26th; adjourned to May 28th; to June 4th, and held to bail for trial at Special Sessions. Called for pleading June 10th; adjourned for trial to June 17th; adjourned to July 8th. Tried, convicted and fined $50.

Counsel: Robert Mazet.

Witnesses: John T. Norton and Chas. Sears.

Chemist: E. G. Love.

CASE No. 1374.

Justice Bristow's Court, Brooklyn, N. Y.

Warrant issued May 25, 1897; answered to May 26th; pleaded guilty and fined $25.

Counsel: Fred A. Ware.

Witnesses: Charles Sears and M. T. Morgan.

Chemist: E. G. Love.

CASE No. 1372.

Justice Bristow's Court, Brooklyn, N. Y.

Warrant issued May 25, 1897; answered to May 26th; pleaded guilty; fined $25.

Counsel: Fred A. Ware.

Witnesses: Chas. Sears and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 1400.

Centre Street Police Court, New York City.

Warrant issued August 12, 1897; answered to August 13th; held to bail for trial at Special Sessions. Called for pleading August 17th; pleaded guilty; fined $50.

Counsel: Tiffany & Brush.

Witnesses: John T. Norton and Chas. Sears.

Chemist: E. G. Love.

CASE No. 1373.

Justice Bristow's Court, Brooklyn, N. Y.

Warrant issued June 5, 1897; answered to June 15th; pleaded guilty and fined $50.

Counsel: Fred A. Ware.

Witnesses: Chas. Sears and Mary Bennett.

Chemist: J. F. Geisler.

CASE No. 1060.

Harlem Police Court, New York City.

Warrant issued September 22, 1897; answered to September 23d; held to bail for trial at Special Sessions.

Called for pleading September 30th; pleaded guilty, and adjourned for sentence to October 13th.

Counsel: Fred A. Ware.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1417.

Harlem Police Court, New York City.

Warrant issued September 7, 1897; returnable September 8th; held to bail for trial at Special Sessions. Called for pleading September 16th; adjourned to October 23d.

Counsel: Tiffany & Brush.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1415.

Harlem Police Court, New York City.

Warrant issued September 7, 1897; answered to September 8th; held to bail for trial at Special Sessions. Called for pleading September 16th; adjourned for trial to October 23d.

Counsel: Tiffany & Brush.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1416.

Harlem Police Court, New York City.

Warrant issued September 20, 1897; returnable September 21st; adjourned to September 30th; to October 13th.

Counsel: Henry M. McKean.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1408.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; returnable September 24th. Not found by officer; sold out business.

Counsel: Henry M. McKean.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1409.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; answered to September 24th; held to bail for trial at Special Sessions. Called for pleading September 30th; pleaded guilty and adjourned to October 13th.

Counsel: Henry M. McKean.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1040.

Harlem Police Court, New York City.

Warrant issued September 20, 1897; answered to September 21st; held to bail for trial at Special Sessions. Called for pleading September 30th; pleaded guilty and adjourned for sentence to October 13th.

Counsel: Henry M. McKean.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1047.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; answered to September 24th; adjourned to September 27th; held to bail for trial at Special Sessions.

Counsel: Henry M. McKean.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1411.

Harlem Police Court, New York City.

Warrant issued September 22, 1897; answered to September 23d; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: Henry M. Heyman.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1066.

Harlem Police Court, New York City.

Warrant issued September 22, 1897; answered to September 23d; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned for trial to October 13th.

Counsel: Henry M. Heyman.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1418.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; returnable September 24th. Not found by officer; sold out; moved away.

Counsel: Robert Mazet.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1062.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; answered to September 24th; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: Robert Mazet.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1063.

Harlem Police Court, New York City.

Warrant issued September 20, 1897; answered to September 21st; held to bail for trial at Special Sessions. Called for pleading September 30th; pleaded guilty and adjourned to October 13th.

Counsel: Henry M. McKean.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1064.

Harlem Police Court, New York City.

Warrant issued September 20, 1897; answered to September 21st; held to bail for trial at Special Sessions. Called for pleading September 30th; plead guilty and adjourned for sentence to October 13th.

Counsel: Henry M. McKean.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1412.

Harlem Police Court, New York City.

Warrant issued September 22, 1897; answered to September 23d; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: C. G. Macy.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 1056.

Harlem Police Court, New York City.

Warrant issued September 22, 1897; answered to September 23d; held to bail for trial at Special Sessions. Called for pleading September 30th; plead guilty and adjourned to October 13th for sentence.

Counsel: Fred A. Ware.

Witnesses: John McGuire and Arch D. Clark.

Chemist: E. G. Love.

CASE No. 509.

Justice Wood's Court, Jamaica, L. I.

Warrant issued June 22, 1897; answered to June 22d, and complaint withdrawn by order of the court.

Counsel: Fred A. Ware.

Witnesses: E. S. Wilson and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 515.

Justice McKenna's Court, Whitestone Landing, N. Y.

Warrant issued April 24, 1897; answered to April 30th; adjourned to May 20th; to June 25th; to July 16th; tried by jury, acquitted.

Counsel: Fred A. Ware.

Witnesses: John McGuire and M. T. Morgan.

Chemist: Chas. M. Stillwell.

CASE No. 516.

Justice McKenna's Court, Whitestone Landing, N. Y.

Warrant issued April 24, 1897; answered to April 30th; adjourned to May 20th; to June 25th, tried by jury, acquitted.

Counsel: Fred A. Ware.

Witnesses: John McGuire and M. T. Morgan.

Chemist: E. G. Love.

CASE No. 1055.

Harlem Police Court, New York City.

Warrant issued September 22, 1897; answered to September 23d; held to bail for trial at Special Sessions. Called for pleading September 30th; plead guilty; adjourned for sentence to October 13th.

Counsel: Henry M. Heyman.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1398.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; answered to September 24th; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: Robert Mazet.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1378.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; answered to September 24th; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: Robert Mazet.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1375.

Jefferson Market Police Court, New York City.

Warrant issued September 3, 1897; answered to September 4th; adjourned for examination to September 7th; examination held and discharged.

Counsel: Fred A. Ware.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1397.

Essex Market Police Court, New York City.

Warrant issued August 19, 1897; answered to August 20th; adjourned for examination to August 31st; held to bail for trial at Special Sessions. Called for pleading September 9th; adjourned for trial to September 30th; to October 13th.

Counsel: Fred A. Ware.

Witnesses: Arch D. Clark and John T. Norton.

Chemist: E. G. Love.

CASE No. 1407.

Harlem Police Court, New York City.

Warrant issued September 23, 1897; answered to September 24th; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned for trial to October 13th.

Counsel: Robert Mazet.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1410.

Harlem Police Court, New York City.

Warrant issued September 20, 1897; answered to September 21st; adjourned to September 22d; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: Tiffany & Brush.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1414.

Harlem Police Court, New York City.

Warrant issued September 20, 1897; answered to September 21st; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: Tiffany & Brush.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1413.

Harlem Police Court, New York City.

Warrant issued September 22, 1897; answered to September 23d; held to bail for trial at Special Sessions. Called for pleading September 30th; adjourned to October 13th.

Counsel: Henry M. Heyman.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1368.

Justice Worth's Court, Brooklyn, N. Y.

Warrant issued July 14, 1897; answered to July 16th; held to bail for trial at Special Sessions. Called for trial July 23d;

adjourned to September 14th; pleaded guilty; sentence suspended.

Counsel: Robert Mazet.

Witnesses: Arch D. Clark and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 531.

Centre Street Police Court, New York City.

Warrant issued April 29, 1897; answered to April 30th; held to bail for trial at Special Sessions. Called for pleading May 6th; pleaded guilty, and fined $50.

Counsel: Fred A. Ware.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 1045.

Justice Cramer's Court, Brooklyn, N. Y.

Warrant issued July 9, 1897; answered to July 12th; adjourned to July 23d; to September 13th; to September 24th; pleaded guilty, and sentence suspended.

Counsel: Robert Mazet.

Witnesses: Arch D. Clark and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1371.

Centre Street Police Court, New York City.

Warrant issued June 8, 1897; answered to June 9th; held to bail for trial at Special Sessions. Called for trial June 17th; tried; convicted; fined $50.

Counsel: Robert Mazet.

Witnesses: John McGuire and John T. Norton.

Chemist: E. G. Love.

CASE No. 912.

Essex Market Police Court, New York City.

Warrant issued April 22, 1897; answered to April 23d; held to bail for trial at Special Sessions. Called for pleading May 6th; adjourned to May 13th; to May 20th; plead guilty and fined $50.

Counsel: Henry M. Heyman.

Witnesses: Charles Sears and John T. Norton.

Chemist: E. G. Love.

CASE No. 1057.

Justice McKenna's Court, Whitestone Landing, L. I.

Warrant issued May 13, 1897; answered to May 20th; adjourned to May 27th; to June 25th; to July 7th; tried by jury; disagreement and set for retrial on July 21st; adjourned to July 28th; tried by jury and acquitted.

Counsel: Albert R. Moore.

Witnesses: John McGuire and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1049.

Justice Worth's Court, Brooklyn, N. Y.

Warrant issued July 9, 1897; answered to July 10; held to bail for trial on July 15th; adjourned to July 20th; pleaded guilty; sentence suspended.

Counsel: Henry M. Heyman.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 527.

Centre Street Police Court, New York City.

Warrant issued April 29, 1897; answered to April 30th; held to bail for trial at Special Sessions. Called for pleading May 6th;

adjourned to May 13th; to May 20th; plead guilty and fined $50.

Counsel: Fred A. Ware.

Witnesses: Arch D. Clark and John McGuire.

Chemist: E. G. Love.

CASE No. 524.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued April 19, 1897; answered to April 22d; plead guilty; fined $50.

Counsel: Albert R. Moore.

Witnesses: John McGuire and Charles Sears.

Chemist: J. F. Geisler.

CASE No. 523.

Justice Ingraham's Court, Long Island City, N. Y.

Warrant issued April 28, 1897; answered to April 30th; adjourned to May 7th; to May 28th; to June 23d; plead guilty; sentence suspended.

Counsel: Henry M. Heyman.

Witnesses: John McGuire and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 526.

Justice Cramer's Court, Brooklyn, N. Y.

Warrant issued April 29, 1897; answered to May 3d; adjourned to May 17th; to May 28th; to June 2d; plead guilty and adjourned to June 9th, for sentence. Case called June 9th, and sentence suspended.

Counsel: W. B. Waite, Jr.

Witness: John McGuire and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 525.

Justice Tighe's Court, Brooklyn, N. Y.

Warrant issued April 19, 1897; answered to April 21st; adjourned to April 22d for trial. Case called April 22d for trial; plead guilty; sentence suspended.

Counsel: Albert R. Moore.

Witnesses: Arch D. Clark and John T. Norton.

Chemist: Charles M. Stillwell.

CASE No. 513.

Justice Brenner's Court, Brooklyn, N. Y.

Warrant issued May 3, 1897; answered to May 4th; adjourned to May 12th; plead guilty and fined $50.

Counsel: Benjamin Estes.

Witnesses: John T. Norton, John McGuire and M. T. Morgan.

Chemist: E. G. Love.

CASE No. 126.

Essex Market Police Court, New York City.

Warrant issued June 2, 1897; answered to June 3d; held to bail for trial at Special Sessions. Called for pleading June 9th; adjourned to June 24th; adjourned to July 1st; plead guilty and fined $50.

Counsel: Benjamin Estes.

Witnesses: E. S. Wilson and M. T. Morgan.

Chemist: J. F. Geisler.

CASE No. 1048.

Yorkville Police Court, New York City.

Warrant issued April 23, 1897; answered to April 26th; held to bail for trial at Special Sessions. Called for pleading May 6th; adjourned to May 13th; plead guilty; sentence suspended.

Counsel: Henry M. Heyman.

Witnesses: Arch D. Clark and John T. Norton.

Chemist: E. G. Love.

CASE No. 521.

Morrisania Police Court, New York City.

Warrant issued April 23, 1897; answered to April 24th; held to bail for trial at Special Sessions. Called for pleading May 6th; adjourned for trial to May 13th; plead guilty; fined $50.

Counsel: Benjamin Estes.

Witnesses: Arch D. Clark, John T. Norton and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1050.

Civil penalty action.

Supreme Court, Kings County, N. Y.

Summons and complaint served May 6, 1897; answered to May 15th. Placed on calendar for trial June 7th; adjourned to October 6th.

Counsel: Henry M. Heyman.

Witnesses: John McGuire, Charles Sears and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1046.

Civil penalty action.

Supreme Court, New York County, N. Y.

Summons and complaint served May 8, 1897; answered to May 15th; case discontinued. Defendant paid civil penalty of $100.

Counsel: Henry M. Heyman.

Witnesses: John T. Norton and Arch. D. Clark.

Chemist: E. G. Love.

CASE No. 100, Special.

Civil penalty action.

Supreme Court, Kings County, N. Y.

Summons and complaint served May 26, 1897; answered to June 14th, and placed on calendar; awaiting trial.

Counsel: Henry M. Heyman.

Witnesses: T. B. Apgar, John T. Norton, Arch. D. Clark and John McGuire.

Chemists: J. F. Geisler and E. G. Love.

CASE No. 911.

Civil penalty action.

Supreme Court, New York County, N. Y.

Summons and complaint served May 7, 1897; answered to May 27th; on calendar for trial on September 28th; adjourned to October 4th.

Counsel: Henry M. Heyman.

Witnesses: John T. Norton and Chas. Sears.

Chemist: E. G. Love.

CASE No. 533.

Civil penalty action.

First District Civil Court, New York City.

Summons issued April 29, 1897; returnable May 6th; default taken and inquest set down for May 12th; case called; took inquest May 12th, and discontinued on May 14th by payment of civil penalty of $100.

Counsel: Fred A. Ware.

Witnesses: John McGuire, John T. Norton and Arch. D. Clark.

Chemist: E. G. Love.

CASE No. 1041.

Civil penalty action.

Third District Civil Court, New York City.

Summons issued May 1, 1897; returnable May 13th; adjourned to May 22d; to May 27th; to June 3d; to June 17th; to July 1st, and case tried; decision in favor of defendant.

Counsel: Fred A. Ware.

Witnesses: John McGuire and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1054.

Civil penalty action.

Third District Civil Court, New York City.

Action commenced by summons issued May 25, 1897; returnable June 3d; case discontinued June 3d on payment of civil penalty of $100.

Counsel: Fred A. Ware.

Witnesses: John T. Norton, John McGuire and Arch. D. Clark.

Chemist: E. G. Love.

CASE No. 518.

Civil penalty action.

Third District Civil Court, New York City.

Summons issued May 17, 1897; returnable May 27th; case set down for trial on June 3d; adjourned to June 17th; to July 1st; to July 8th. Case tried and decision in favor of plaintiff. Case appealed by defendant and awaiting trial.

Counsel: Fred A. Ware.

Witnesses: John T. Norton and John McGuire.

Chemist: J. F. Geisler.

CASE No. 1402.

Centre Street Police Court, New York City.

Warrant issued August 17, 1897; answered to August 18th; held to bail for trial at Special Sessions. Called for pleading September 9th; adjourned to September 16th; plead guilty; sentence suspended.

Counsel: C. G. Macy.

Witnesses: Chas. Sears and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 522.

Civil penalty action..

Supreme Court, New York City.

Summons and complaint served May 7, 1897; answered to May 24th; placed on calendar for trial September 28th; adjourned to October 4th.

Counsel: Henry M. Heyman.

Witnesses: John T. Norton and Arch. D. Clark.

Chemist: E. G. Love.

CASE No. 517.

Civil penalty action.

Tenth District Civil Court, New York City.

Summons issued May 1, 1897; returnable May 10th, when demand was made for trial by jury; adjourned case called for trial May 24th. Trial by jury; verdict in favor of defendant.

Counsel: Fred A. Ware.

Witnesses: John McGuire, John T. Norton and Arch D. Clark.

Chemist: J. F. Geisler.

CASE No. 1391.

Centre Street Police Court, New York City.

Warrant issued August 17, 1897; answered to August 18th; held to bail for trial at Special Sessions. Called for pleading September 9th; adjourned to September 16th; to September 23d; plead guilty; sentence suspended.

Counsel: C. G. Macy.

Witnesses: Chas. Sears and John T. Norton.

Chemist: J. F. Geisler.

CASE No. 1403.

Civil penalty action.

Supreme Court, New York City.

Action commenced September 10, 1897; answered to September 30th; awaiting trial.

Counsel: Henry M. McKean.

Witnesses: John T. Norton and Chas. Sears.

Chemist: E. G. Love.

CASE No. 1406.

Civil penalty action.

Supreme Court, New York City.

Action commenced September 10, 1897; answered to September 30th; awaiting trial.

Counsel: Henry M. McKean.

Witnesses: M. Zanzone, John T. Norton and Chas. Sears.

Chemist: E. G. Love.

CASE No. 1402.

Essex Market Police Court, New York City.

Warrant issued August 19, 1897; answered to August 20th; adjourned for examination to August 31st, and case dismissed.

Counsel: C. G. Macy.

Witnesses: Chas. Sears and Chas. Schriever.

Chemist: J. F. Geisler.

CASE No. 1062.

Civil penalty action.

Supreme Court, Kings County, N. Y.

Action commenced May 4, 1897; answered to May 18th, and case settled by payment of civil penalty of $100 and costs.

Counsel: W. B. Waite, Jr.

Witnesses: Arch. D. Clark, John McGuire and Chas. Sears.

Chemist: J. F. Geisler.

The Status and Final Disposition of the Following Oleomargarine Cases, Previously Reported, is Given in the Following Table.

Case No.	Court.	Place.	Called for trial.	Remarks.
1201	General Sessions........	New York city.	February 25, 1897	Tried by jury and acquitted.
1200	General Sessions........	New York city.	November 16, 1896	Pleaded guilty, fined $25.
1159	Third District Civil	New York city.	November 19, 1896	Death of witness Meeteer, case discontinued.
1063	Tenth District Civil.....	New York city.	January 26, 1897	Death of witness Meeteer, case discontinued.
1149	First District Civil......	Brooklyn, N. Y.	October 29, 1896	Tried, judgment for plaintiff for $100.
1095	First District Civil......	Brooklyn, N. Y.	October 29, 1896	Tried, judgment for plaintiff for $100.
1427	Justice McKenna's......	Whitestone Landing, N. Y.	October 8, 1896	Pleaded guilty, fined $25.
1407	Civil Justice............	Brooklyn, N. Y.	November 20, 1896	Case settled, civil penalty of $100.
1084	General Sessions........	New York city.		Awaiting trial.
1159	General Sessions........	New York city.		Pleaded guilty, fined $25.

The Status and Final Disposition of the Following Milk Cases, Previously Reported, is Given in the Following Table.

Case No.	Court.	Place.	Called for trial.	Remarks.
1791	First District Civil....	New York city	October 14, 1896	Judgment given in favor of defendant.
1788	Seventh District Civil .	New York city	October 14, 1897	Discontinued on account of death of witness.
3501	Ninth District Civil...	New York city	October 9, 1896	Judgment taken by default for $100 and costs.
3504	First District Civil....	New York city	November 18, 1896	Tried; judgment in favor of defendant.
1998	Ninth District Civil ...	New York city	April 22, 1897	Case settled, paid penalty of $100 and costs.
3584	First District Civil....	New York city	April 22, 1897	Discontinued on account of death of witness.
1995	Tenth District Civil ...	New York city	November 9, 1896	Tried; decision favor of defendant.
1996	Supreme	New York city	May 14, 1897	Case discontinued.
1997	Eighth District Civil ..	New York city	October 30, 1896	Tried; decision favor of defendant.
1986	General Sessions......	New York city	April 23, 1897	Awaiting trial.
1979	Thirteenth District Civil	New York city	December 7, 1896	Tried; complaint dismissed.
3502	Ninth District Civil...	New York city	October 16, 1896	Tried; judgment in favor of defendant.
1951	General Sessions......	New York city		Awaiting trial.
1989	First District Civil....	New York city	December 9, 1896	Tried; judgment in favor of defendant.

The Status and Final Disposition of the Following Vinegar Cases Previously Reported is Given in the Annexed Table.

Case No.	Court.	Place.	Called for trial.	Remarks.
1042	Supreme	Suffolk county, Riverhead, N. Y.	March 1, 1897	Settled; penalty paid of $50.
1035	Special Sessions	Shelter Island, N. Y.	November 13, 1896	Tried by jury; convicted; fined $50.

The final result of prosecutions under the laws relating to oleomargarine, adulterated milk and vinegar, for the year ending September 30, 1897, were as follows:

Cases remaining September 30, 1896:	
Oleomargarine cases	10
Milk cases	14
Vinegar cases	2
Oleomargarine cases prosecuted during the year ending, September 30, 1897	65
Milk cases prosecuted during the year ending, September 30, 1897	25
Vinegar cases prosecuted during the year ending, September 30, 1897	72
Total number of cases	188
Convicted	77
Civil penalties imposed	23
Civil actions awaiting trial	12
Absconded	9
Dismissed on examination	7
Discontinued	5
Acquitted	20
Remaining on calendar untried (criminal)	35
Total	188

Inspections of Milk at Ferries, Railroad Stations and Steamboat Landings.

During the months of July, August and September, an inspection of milk arriving over the different railroads and steamboats for consumption in New York and Brooklyn was made, after the milk had been delivered by the common carriers to the grocers and peddlers. The plan adopted was, as usual, to obtain from the police department a detail of two or more officers for duty at each depot when inspections were made. With their assistance the wagons were formed in line as they came off the ferries or from the railroad depots into the streets. We then inspected the milk found on each wagon before allowing it to leave the line.

The milk inspected when delivered by each railroad and steamboat line, represents one day's shipment over each line for consumption in New York and Brooklyn, to which must be added 2,500 cans, estimated as the average per day by miscellaneous conveyances. During those months the result of these inspections showed, by the test applied, that only a small percentage had been adulterated. The following statement shows the amount of milk, cream and condensed milk received over the different routes on the day the inspections were made, to wit:

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of October, 1896.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent. over each route.
Erie	114,301	3,666	1,900	3,867	17.4
New York Central and Harlem	67,938	591	2,572	2,294	10.3
Ontario	111,439	4,215	....	3,731	16.8
Susquehanna	52,634	573	....	1,716	7.7
Northern	8,297	....	....	268	1.3
West Shore	39,959	758	622	1,333	6
New Haven	35,379	132	....	1,146	5.2
Delaware, Lackawanna and Western	168,756	2,884	....	5,537	24.9
Long Island	2,789	....	....	90	.4
New Jersey Central	7,764	98	....	254	1.1
Homer Ramsdell Transportation Company	25,089	351	....	820	3.7
Lehigh Valley	17,428	189	....	568	2.6
Other sources	18,600	....	....	600	2.7
Total cans	670,373	13,457	5,094	....	....

Total cans crude milk	670,373
Total cans cream	13,457
Total cans unsweetened condensed milk	5,094
Total cans, all kinds	688,924
Daily average crude milk, cans	21,625
Daily average cream, cans	434
Daily average unsweetened condensed milk, cans	164
Average price crude milk to producer, per quart	$0 02⅛
Average platform price per can, freight paid	1 18

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of November, 1896.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent. over each route.
Erie	113,430	3,823	1,307	3,952	17.4
New York Central and Harlem	71,898	717	3,008	2,521	10.3
Ontario	110,367	4,089	....	3,815	17
Susquehanna	49.144	857	....	1,667	7.7
Northern	8,206	....	....	274	1.2
West Shore	41,644	663	932	1,441	6
New Haven	34,252	177	30	1,144	5.2
Delaware. Lackawanna and Western	158,654	2,935	....	5,386	21.9
Long Island	2,738	....	....	91	.4
New Jersey Central	7,457	127	....	253	1.1
Homer Ramsdell Transportation Co	24,000	300	....	810	3.6
Lehigh Valley	15,535	65	....	520	2.6
Other sources	18,000	....	....	600	2.7
Total cans	655,325	13,753	5,277	....	....

Total cans crude milk	655,325
Total cans cream	13,753
Total cans unsweetened condensed milk	5,277
Total cans, all kinds	674,355
Daily average crude milk, cans	21,844
Daily average cream, cans	458
Daily average unsweetened condensed milk, cans	176
Average price crude milk to producer, per quart	$0 02¼
Average platform price per can, freight paid	1 48

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of December, 1896.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent. over each route.
Erie	114,993	3,558	1,013	3,857	18
New York Central and Harlem	74,366	1,059	3,525	2,547	11.9
Ontario	102,334	3,063	....	3,400	15.8
Susquehanna	47,683	1,009	....	1,571	7.4
Northern	8,067	....	....	260	1.2
West Shore	48,068	464	888	1,594	7.5
New Haven	36,145	202	....	1,173	5.4
Delaware, Lackawanna and Western	151,998	2,366	....	4,979	23.2
Long Island	2,752	....	....	89	.5
New Jersey Central	8,209	149	....	269	1.3
Homer Ramsdell Transportation Company	21,699	371	....	712	3.3
Lehigh Valley	13,814	53	....	447	2.1
Other sources	18,600	....	....	600	2.4
Total cans	648,728	12,294	5,426	....	....

Total cans crude milk	646,728
Total cans cream	12,294
Total cans unsweetened condensed milk	5,426
Total cans, all kinds	666,448
Daily average crude milk, cans	20,927
Daily average cream, cans	397
Daily average unsweetened condensed milk, cans	175
Average price crude milk to producer, per quart	$0 2¼
Average platform price per can, freight paid	1 41

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the month of January, 1897.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent. over each route.
Erie	121,087	3,558	1,402	4,066	19.2
New York Central and Harlem	78,605	1,156	3,142	2,674	12.6
Ontario	98,711	2,615	....	3,268	15.4
Susquehanna	49,022	1,004	....	1,614	7.6
Northern	8,193	....	....	264	1.3
West Shore	48,557	686	814	1,615	7.6
New Haven	39,239	175	75	1,274	6
Delaware, Lackawanna and Western	148,082	1,985	....	4,841	22.8
Long Island	2,753	....	....	89	.4
New Jersey Central	8,529	164	....	282	1.4
Homer Ramsdell Transportation Company	6,625	197	....	220	1.2
Lehigh Valley	13,780	62	....	445	2.1
Other sources	18,600	....	....	600	2.4
Total cans	641,796	11,602	5,433	....	....

Total cans crude milk	641,796
Total cans cream	11,602
Total cans unsweetened condensed milk	5,433
Total cans, all kinds	658,831
Daily average crude milk, cans	20,703
Daily average cream, cans	374
Daily average unsweetened condensed milk, cans	175
Average price crude milk to producer, per quart	$0 02¼
Average platform price per can, freight paid	1 33

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of February, 1897.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent. over each route.
Erie	114,785	3,562	1,394	4,277	20
New York Central and Harlem	72,119	1,054	2,649	2,710	12.7
Ontario	95,955	2,778	....	3,526	16.5
Susquehanna	46,669	975	....	1,702	8
Northern	7,511	....	....	268	1.3
West Shore	43,055	893	919	1,602	7.5
New Haven	36.478	162	....	1,303	6.1
Delaware, Lackawanna and Western	125,845	2,163	....	4,554	21.3
Long Island	2,525	....	....	90	.4
New Jersey Central	8,688	150	....	315	1.5
Homer Ramsdell Transportation Company *	....	....	....	....	....
Lehigh Valley †	11,000	65	....	395	1.9
Other sources	16,000	....	....	600	2.8
Total cans	580,930	11,802	5,012	....	....

* Not running. † Estimated.

Total cans crude milk	580,930
Total cans cream	11,802
Total cans unsweetened condensed milk	5,012
Total cans, all kinds	597,744
Daily average crude milk, cans	20,748
Daily average cream, cans	422
Daily average unsweetened condensed milk, cans	179
Average price crude milk to producer, per quart	$ 02⅝
Average platform price per can, freight paid	1 36

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of March, 1897.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent. over each route.
Erie	124,231	3,410	1,414	4,163	18.7
New York Central and Harlem	72,106	955	2,556	2,439	11
Ontario	112,913	3,949	....	3,770	17
Susquehanna	52,703	1,562	....	1,750	8
Northern	8,207	....	....	265	1.2
West Shore *	46,000	900	875	1,541	6.9
New Haven	39,184	165	....	1,269	5.2
Delaware, Lackawanna and Western	151,550	2,553	....	4,971	22.3
Long Island	2,750	....	....	89	.4
New Jersey Central	9,510	154	....	812	1.4
Homer Ramsdell Transportation Company	16,426	358	....	541	2.4
Leghigh Valley	15,840	154	....	516	2.3
Other sources	18,600	....	....	600	2.7
Total cans	670,019	14,160	4,845	....	....

* Estimated.

Total cans crude milk	670,019
Total cans cream	14,160
Total cans unsweetened condensed milk	4,845
Total cans, all kinds	689,024
Daily average crude milk, cans	21,614
Daily average cream, cans	457
Daily average unsweetened condensed milk, cans	156
Average price crude milk to producer, per quart	$0 02[illegible]
Average platform price per can, freight paid	1 28

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of April, 1897.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent over each route.
Erie	119,449	4,882	2,532	4,227	18.2
New York Central and Harlem	64,595	739	1,024	2,212	.5
Ontario	108,378	5,079	....	3,782	16.3
Susquehanna	55,748	2,399	....	1,938	8.3
Northern	7,429	....	....	247	1.1
West Shore	57,140	1,524	1,254	1,997	8.6
New Haven	39,876	192	....	1,335	5.7
Delaware, Lackawanna and Western	148,591	2,965	....	5,052	21.7
Long Island	2,595	....	....	87	.4
New Jersey Central	9,236	....	....	315	1.4
Homer Ramsdell Transportation Company	23,185	866	....	802	3.4
Lehigh Valley	19,310	309	....	654	2.8
Other sources	18,000	....	....	600	2.6
Total cans	673,532	18,905	4,810	....	....

Total cans crude milk	673,532
Total cans cream	18,905
Total cans unsweetened condensed milk	4,810
Total cans all kinds	697,247
Daily average crude milk, cans	22,451
Daily average cream, cans	630
Daily average unsweetened condensed milk, cans	160
Average price crude milk to producer per quart	$0 02½
Average platform price per can, freight paid	1 16

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the month of May, 1897.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent over each route.
Erie	133,324	6,718	3,091	4,617	18 6
New York Central and Harlem	65,842	366	384	2,158	8.7
Ontario	118,818	6,584	....	4,045	16.3
Susquehanna	58,029	3,393	....	1,981	8.0
Northern	8,619	....	....	278	1.1
West Shore	57,362	2,013	1,294	1,957	7.9
New Haven	43,638	171	....	1,418	5.7
Delaware, Lackawanna and Western	170,956	5,104	....	5,679	22.8
Long Island	2,612	....	....	84	.3
New Jersey Central	10,056	299	....	334	1.3
Homer Ramsdell Transportation Company	27,148	1,479	....	923	3.7
Lehigh Valley	23,812	1,023	....	801	3.2
Other sources	18,606	....	....	600	2.4
Total cans	738,816	27,150	4,769	....	....

Total cans crude milk	738,816
Total cans cream	27,150
Total cans unsweetened condensed milk	4,769
Total cans all kinds	770,735
Daily average crude milk, cans	23,833
Daily average cream, cans	876
Daily average unsweetened condensed milk, cans	154
Average price crude milk to producer, per quart	$0 02
Average platform price per can, freight paid	1 06

Receipts of Crude ***Milk****, Unsweetened Condensed* ***Milk*** *and Cream in* ***New York*** *by the* ***Railroads*** *and other sources, for the Month of June,* **1897.**

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans. milk, cream and condensed milk.	Per cent over each route.
Erie	134,110	8,836	3,007	4,865	19.1
New York Central and Harlem	57,907	562	46	1,950	7.7
Ontario	120,390	7,365	....	4,258	12
Susquehanna	65,679	3,799	....	2,316	9.2
Northern	9,101	....	....	303	1.2
West Shore	53,224	2,486	1,396	1,903	7.4
New Haven	43,720	124	....	1,461	5.7
Delaware, Lackawanna and Western *	160,000	4,490	....	5,483	21.6
Long Island	2,440	....	....	81	.3
New Jersey Central	10,510	291	....	360	1.2
Homer Ramsdell Transportation Company	26,982	1,516	....	920	3.7
Lehigh Valley	25,401	1,815	....	907	3.6
Other sources	18,000	....	....	600	2.3
Total cans	727,464	31,284	4,449	....	....

* Estimated.

Total cans crude milk	727,464
Total cans cream	31,284
Total cans unsweetened condensed milk	4,449
Total cans all kinds	763,197
Daily average crude milk, cans	24,249
Daily average cream, cans	1,043
Daily average unsweetened condensed milk, cans	148
Average price crude milk to producer per quart	$0 01½
Average platform price per can, freight paid	96

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of July, 1897.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent. over each route.
Erie	138,746	7,576	2,997	4,816	18.2
New York Central & Harlem	48,169	376	138	1,570	6
Ontario	139,977	9,294	....	4,815	18.2
Susquehanna	59,719	3,361	....	2,035	7.7
Northern	8,451	....	....	273	1
West Shore	58,244	2,454	2,501	2,039	7.7
New Haven	43,780	73	....	1,415	5.8
Delaware, Lackawanna & Western	198,856	5,568	....	6,594	25
Long Island	2,480	....	....	80	.3
New Jersey Central	9,630	273	....	319	1.2
Homer Ramsdell Transportation Company	26,048	474	....	855	3.2
Lehigh Valley	30,058	1,804	....	1,028	4
Other sources	18,600	....	....	600	2.2
Total cans	782,758	31,253	5,636	....	....

Total cans crude milk	782,758
Total cans cream	31,253
Total cans unsweetened condensed milk	5,636
Total cans all kinds	819,647
Daily average crude milk, cans	25,250
Daily average cream, cans	1,008
Daily average unsweetened condensed milk, cans	182
Average price crude milk to producer per quart	$0.02
Average platform price per can, freight paid	1.10

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of August, 1897.

RAILROADS.	Cans crude milk.	Cans Cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent over each route.
Erie	129,705	6,455	2,724	4,480	18.6
New York Central and Harlem	43,718	337	105	1,425	5.9
Ontario	127,520	6,911	....	4,336	18
Susquehanna	55,899	3,473	....	1,915	2.9
Northern	8,453	....	....	273	1.1
West Shore	54,188	2,065	2.007	1,880	7.8
New Haven	39,089	60	....	1,261	5.2
Delaware, Lackawanna and Western	174,907	4,005	....	5,771	23.9
Long Island*	2,480	....	....	80	.8
New Jersey Central	8,784	217	....	290	1.2
Homer Ramsdell Transportation Company	25,816	400	....	846	3.5
Lebigh Valley	28,902	1,543	....	982	4.1
Other sources	18,600	....	....	600	2.5
Total cans	718,011	25,466	4,836	....	....

*Estimated.

Total cans crude milk	718,011
Total cans cream	25,466
Total cans unsweetened condensed milk	4,836
Total cans all kinds	748,313
Daily average crude milk, cans	23,162
Daily average cream, cans	821
Daily average unsweetened condensed milk, cans	156
Average price crude milk to producer, per quart	$0.02
Average platform price per can, freight paid	1.00

Receipts of Crude Milk, Unsweetened Condensed Milk and Cream in New York by the Railroads and other sources, for the Month of September, 1897.

RAILROADS.	Cans crude milk.	Cans cream.	Cans condensed milk.	Daily average cans milk, cream and condensed milk.	Per cent over each route.
Erie	123,815	4,693	2,568	4,369	17.8
New York Central and Harlem	47,646	394	329	1,612	6.5
Ontario	118,134	5,674	....	4,127	16 8
Susquehanna	56,328	2,699	....	1,968	8
Northern	12,668	....	....	422	1.7
West Shore	53,488	1,872	1,689	1,000	7.7
New Haven	38,299	69	....	2,229	5.2
Delaware, Lackawanna and Western	177,444	5,213	....	6,088	24.8
Long Island	2,400	....	....	80	3
New Jersey Central	8,630	235	....	296	1.2
Homer Ramsdell Transportation Company	26,538	279	....	894	3.6
Lehigh Valley	28,795	1,042	....	995	4
Other sources	18,000	....	....	600	2.4
Total cans	712,135	22,170	4,586	....	....

Total cans crude milk	712,135
Total cans cream	22,170
Total cans unsweetened condensed milk	4,586
Total cans all kinds	738,891
Daily average crude milk, cans	23,738
Daily average cream, cans	739
Daily average unsweetened condensed milk, cans	153
Average price crude milk to producer, per quart	$0 02¼
Average platform price per can, freight paid	1 20

Total receipts over all roads for the year ending September 23, 1897.

MONTH.	Cans crude milk.	Cans cream.	Cans unsweetened condensed milk.	Average market price to producer per quart.	Platform price; freight paid.
1896.					
October	670,373	13,457	5,094	$0.02⅛	$1 18
November	655,325	13,753	5,277	0.02⅝	1 48
December	648,728	12,294	5,426	0.02¾	1 41
1897.					
January	641,796	11,602	5,433	0.02¾	1 38
February	580,930	11,802	5,012	0.02⅝	1 36
March	670,019	14,160	4,845	0.02⅜	1 28
April	678,532	18,905	4,810	0.02⅛	1 16
May	738,816	27,150	4,769	0.02	1 06
June	727,464	31,284	4,449	0.01¾	96
July	782,758	31,253	5,636	0.02	1 10
August	718,011	25,466	4,836	6.02	1 00
September	712,135	22,170	4,586	0.02¼	1 20
	8,219,887	233,296	60,173	....	....

Total cans crude milk	8,219,857
Total cans cream	233,296
Total cans unsweetened condensed milk	60,173
Estimated value (freight included)	$13,285,341 42
Daily average cans crude milk	22,520
Daily average cans cream	639
Daily average cans unsweetened condensed milk	165

The above amount of milk does not include milk sold to condensers, most of which reaches the New York market in small cans, which is estimated to equal 1,875,000 cans.

Estimated value	$2,587,500 00
Estimated value as shown above	13,285,341 42
Total	$15,872,841 42

The above receipts of milk, cream and condensed milk is equal to 11,502,059 cans of crude milk of 40 quarts each, or 460,082,360 quarts, representing a daily receipt of 1,260,499 quarts of crude milk.

In conclusion, I would like to say that the experts and agents of the Department in this division have given their most hearty efforts to make this report show a successful year's work, and I herewith publicly express my appreciation of the same.

Yours very truly,

FREDERICK J. H. KRACKE,

Assistant Commissioner of Agriculture.

REPORT OF HENRY S. AMBLER.

Hon. Chas. A. Wieting, *Commissioner of Agriculture:*

Dear Sir.—I respectfully submit my annual report of the work done in the third division of the State Department of Agriculture during the year ending September 30, 1897. This division now comprises the counties of Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester; the territory added to this division the past year was the lower half of Westchester county, and has added largely to the work of inspection; for eleven months of the year we only had three agents in the division, and I have been with one or the other of them most of the time assisting with their work.

We have inspected 51,508 cans of milk, examined over 900 stores, looking for oleomargarine and adulterated vinegar. We have taken in all during the past year 380 samples which were sent to the chemist. The analyses showed that 310 were being sold or exposed for sale in violation of the Agricultural Law and 70 of said samples conformed to the law. They are divided as follows:

MILK.

Samples below standard	175
Samples not analyzed	13
Samples above State standard	67
Total samples of milk taken	255

VINEGAR.

Samples below State standard	79
Samples not pure cider vinegar	26
Total samples of vinegar taken	105

OLEOMARGARINE.

Samples which proved to be oleomargarine	17
Samples which proved to be butter	3
Total samples of oleomargarine taken	20

Sanitary Inspections.

The sanitary inspection of creameries and stables that you have inaugurated, and the efficient manner in which your inspector is doing his work is bringing forth good results. There is a marked improvement in the condition of many of the creameries and if a thorough inspection and enforcement of the law in regard to the care and feed of the dairy cows can be made this winter it will do much to promote the health of the cattle, and the benefits that would arise from that can hardly be overestimated.

The Babcock test has been used by the agents quite generally and found of great value. The machines we have in use are quite cumbersome, and if a lighter machine could be had it would be much more convenient and just as useful, for when an agent goes along to inspect dairies he is not able to carry the machine with his other necessary apparatus. Mr. Palmer, who does train work largely, when he finds milk that he suspects, takes three samples, and when he gets back to his hotel or home, runs one of them through the Babcock to ascertain whether he is right before he sends the sample to the chemist. In warm weather it is necessary to put the milk through the machine as soon as possible after taking the sample and for that reason the agent should have it with him.

The amount of milk carried by the several railroads and steamboats to New York City during the past year, subject to inspection in this division was 7,262,644 forty-quart cans of crude milk, 220,612 cans of cream, 61,053 cans of condensed, or equivalent to 338,018,280 quarts of crude milk. In addition to this is the milk consumed in the cities and villages in the ten counties of this division.

Rabies.

There was an outbreak of rabies in Columbia county during the month of September which created great alarm. Upon investigation it was ascertained that a strange dog, which was very vicious, came into Chatham village on August fifteenth. He fought every dog he came across and he was known to bite dogs belonging to Mrs. Hurd, John Mickle, E. Rivenbergh, H. B. Ambler and W. H. Barrett. He attempted to bite a horse belonging to Mr. S. P. Allen, jumping at the animal's head several times. The same day he was seen in the adjoining town, Austerlitz, chasing a flock of sheep; he was driven out of the lot by a man stoning him and went into the adjoining lot where a mare and colt belonging to James Doyle were pasturing; he chased the mare and caught her by the nose. He was then seen going up the road toward Mr. Pierson's and Mr. Quick's. The next day, the 16th, he was seen again in Chatham village and bit a dog belonging to Cornelius Woods. On the 17th he appeared on the farm of Fred Woods in the town of Chatham and bit his dog, then went to Mr. Hartigan's, the adjoining farm, where he was seen chasing cows. That is the last positive evidence we have in regard to the dog.

On August 30th Mr. Rivenbergh noticed that his dog was sick; it acted as if choked, could not swallow, lost control of its hind quarters, a general paralysis set in and it died September 3.

August 31st John Mickles' dog was taken sick, could not swallow, became partly paralyzed and was killed. September 7th, a cow belonging to John Quick was taken sick. He thought she had become crazy; he described her as being perfectly wild, hooking everything, running her horns into the ground, bellowing and frothing at the mouth; she died in about 24 hours from the time he first observed her sickness. A veterinarian was not called in the case. September 11th a cow belonging to James Hartigan was taken sick; she would not eat and ran around the lot, bellowing and hooking at the other cows, yawning, drooling at the mouth and grinding her teeth. As she was dangerous she was isolated from the other cattle. She became so wild she would hook and bite at everything, the milk secretion stopped; she could not swallow water, but when she tried to drink she would hook the pail over; she finally became paralyzed and died on the thirteenth. Mr. Hartigan held a post mortem and said all the organs looked healthy except the third stomach which impacted.

September 13th another cow belonging to Mr. Hartigan was noticed to stop eating; she yawned, bellowed, ran up and down the fields hooking at the other cows and was therefore isolated; she could not eat or drink, being unable to swallow; her eyes were abnormally bright, her ears erect, showing great nervous tension; she had an old abrasion on her nose which had not healed; she gave no milk; she kept up the bellowing constantly, finally becoming so weak that she fell down when attempting to bellow, until at last she was unable to rise and died from paralysis on the afternoon of the 16th. At this time Dr. H. B. Ambler, veterinarian, was advised of these facts and gave it as his opinion that the cows had died of rabies. He held an autopsy on his cow the following morning and forwarded a portion of the brain to the Department of Agriculture, Albany, N. Y., which was from there sent to the Cornell University. A portion of the brain was also sent to the New York Pasteur Institute. This cow and the first one that died would fall down when they were held to administer medicine. The cow in question in falling broke off one of her horns. Mr. Hartigan in trying to wrap a cloth around the pith to stop its bleeding got his hand scratched and the saliva from the cows mouth got on to it and two of the men in skinning the first animal that died cut their hands. On advice of their physicians they went to the Pasteur Institute in New York, and they went through a course of treatment.

September 13th Benjamin Wilson's dog was taken sick; was running around aimlessly; could not drink; jaws open; drooling; acted as if choked; he was brought to Dr. Ambler's hospital on September 17th. He became paralyzed that night and died the next day.

September 16th another cow belonging to Mr. Hartigan was noticed to act strangely, very much like the others, but not to so great a degree; she could neither eat nor drink; bellowed; pawed; grinding her teeth, drooling, and constipated. She would become wild at the sight of a dog; on the 19th this cow appeared better, but her voice was altered considerably; the muzzle dry; did not ruminate; tried to drink, but could not swallow and hooked the pail; this cow died on September 22d.

Dr. Moore, bacteriologist from Cornell, Dr. Kelly, veterinarian from the Department at Albany, and Dr. Ambler, of Chatham, made an examination of this cow on the 18th, in the presence of Dr. Wheeler and local physicians. Drs. Moore and Kelly saw Mr. Wilson's dog, which died in their presence. Dr. Moore held a post-mortem on the dog and took the brain with him to Cornell to inoculate rabbits with it.

September 20th James Doyle's mare was taken sick; she acted very much as the cows of Mr. Hartigan did, biting, drooling, becoming partly paralyzed, and was then killed.

September 24th Henry C. Pierson's cow was taken sick; she had all the symptoms that Mr. Hartigan's cow had; she died on the 26th. A post-mortem was held, and the brain sent to Dr. Moore, at Cornell. All the other dogs that were bitten or suspected of being bitten were destroyed, and the authorities of Chatham caused all dogs to be muzzled or confined. All these cases were traced to the strange dog that appeared in Chatham on August 15th. The result of the experiments made by Cornell University and the Pasteur Institute, N. Y., showed that the cases were rabies, as the rabbits and guinea pigs inoculated all developed rabies. I have gone thus fully into details in describing the above cases to show the similarity of the symptoms in each case, so that in the future where such symptoms appear we may suspect the cause and take the precaution necessary to prevent the spread of this terrible malady.

There was a report of an outbreak of hog cholera at Kinderhook, and upon investigation it was shown that a number of hogs had died there, but not from hog cholera or swine plague.

On August 17, 1897, I had the honor of being appointed by Governor Black one of the delegates to represent the State of New York at the Farmers' National Congress, held at St. Paul, Minn., August 31st to September 3d, and at your request I attended to look after any matters that might come up affecting the dairy interests of this State. The State of New York has achieved a world-wide reputation for making a superior article of full-cream cheese, which is protected in the State by statutory regulations providing for branding, and making it a misdemeanor to falsely brand the cheese produced therein. In view of the facts ascertained by you, that unprincipled parties in other States had counterfeited the New York State brand and were branding an inferior article of cheese and selling it for New York State full cream cheese, to the great injury of the reputation of the cheese makers of this State, I brought the matter before the Congress by presenting the following preamble and resolution, which was passed:

Whereas, Certain States have, for the protection of producers and consumers of pure food products, issued State labels, to be used only on pure food articles mentioned, and making it a misdemeanor to use them on any other; and

Whereas, Said labels are being counterfeited by unprincipled dealers outside of the respective States, and are being used to brand an inferior article, not only to the detriment of the producer of the pure food article but also to the consumer; therefore, be it

Resolved, That this Farmers' National Congress do petition the Congress of the United States to pass an act allowing each State to copyright such labels as they may issue for the protection of the products of their respective States.

Detailed Report of Work Performed.

The following tables give a detailed report of work performed by each employe in this division of the Department between September 30, 1896, and October 1, 1897:

REPORT OF WALTER J. BENNETT.

Number of days attending court	6
Number of days inspecting milk	162
Number of days inspecting herds	3
Number of days obtaining evidence	3
Number of days inspecting vinegar	19
Number of days inspecting butter	21
Number of days on special duty	63
Total number of days	277

Number of creameries inspected as to condition	11
Number of condenseries inspected	7
Number of butter factories inspected	6
Number of cheese factories inspected	4
Number of cows inspected	188
Number of stores inspected for vinegar and butter	529
Number of milk peddlers inspected	428
Number of tubs of butter examined	3,273
Number of cases of bottles milk examined	432
Total number of bottles of bottled milk examined	5,753
Number of creamerymen's milk inspected on delivery at boat and railroad stations	94
Number of dairymen's milk inspected on delivery at creameries and railroad stations	3,531
Number of dairymen's milk inspected on delivery at butter factories	139
Number of dairymen's milk inspected on delivery at cheese factories	66

Number of cans creamerymen's milk inspected on delivery at boat and railroad stations	1,713
Number of cans dairymen's milk inspected at creameries and railroad stations	11,403
Number of cans store milk inspected	181
Number of cans peddlers' milk inspected	1,559
Number of cans dairymen's milk inspected on delivery at cheese factories	286
Number of cans dairymen's milk inspected on delivery at condenseries and butter factories	1,020
Total number cans inspected	16,162

Estimated number of miles traveled	17,255
Number samples of milk delivered to chemist	136
Number samples of vinegar delivered to chemist	31
Number of samples of oleomargarine delivered to chemist	11

REPORT OF R. H. PALMER.

Number days attending court	7
Number days inspecting milk	212
Number days inspecting herds	8
Number days obtaining evidence	12
Number days inspecting vinegar	22
Number days inspecting butter	8
Number days on special duty	30
Total number of days	299

Number creameries inspected	40
Number butter factories inspected	12
Number cows inspected	1,200
Number stables inspected	24
Number stores inspected for vinegar and butter	78

Number milk peddlers inspected	70
Number creamerymen's milk inspected on delivery at boat or railroad depot	240
Number of dairymen's milk inspected on delivery at creameries, boat and railroad station	1,200

Number cans creamerymen's milk inspected	13,700
Number cans dairymen's milk inspected	9,300
Number cans peddlers' milk inspected	300
Total number of cans inspected	23,300

Number samples delivered to chemist	95
Estimated number of miles traveled	30,000

REPORT OF M. DUGAN.

Number days attending court	6
Number days inspecting milk	145
Number days inspecting vinegar	18
Number days inspecting butter	31
Number days obtaining evidence	10
Number days on special duty	20
Total number of days	230

Number creameries inspected	118
Number of condenseries inspected	3
Number cheese factories inspected	1
Number milk peddlers inspected	391
Number stores inspected for butter and vinegar	259
Number creamerymen's milk inspected on delivery at boat and railroad depots	51
Number dairymen's milk inspected on delivery to creameries, boat and railroad stations	2,743

Number cans creamerymen's milk inspected	597
Number cans dairymen's milk inspected	8,754
Number cans peddlers' milk inspected	1,467
Number cans store milk inspected	327
Total number cans inspected	11,141

Number samples sent to chemist	111
Estimated number miles traveled	8,071

REPORT OF FRED C. SLAUGHTER.

Number days inspecting milk	14
Number days on special duty	6
Total number of days	20

Number creameries inspected	11
Number creamerymen's milk inspected	2
Number dairymen's milk inspected on delivery to creameries and railroad depots	219

Number cans creamerymen's milk inspected	46
Number cans dairymen's milk inspected	571
Total number of cans inspected	617

Number cans peddlers' milk inspected	29
Number stores inspected	6
Number packages butter inspected	10
Number samples delivered to chemist	10
Estimated number miles traveled	530

Prosecutions.

The following statement represents prosecutions commenced during the year ending September 30, 1897, under the Agricultural Law relating to the sale of adulterated milk and the present status of the cases:

MILK.

CASE No. 2866.

Supreme Court.

Summons and complaint issued January 13, 1897; September 30, 1897, case pending.

Attorney for State, Sanford W. Smith.

Witnesses: R. H. Palmer, Thomas P. Kiernan, and chemist, E. J. Wheeler.

CASE No. 1128.

Supreme Court.

Summons and complaint issued December 26, 1896. August 6, 1897, case withdrawn on payment of costs.

Attorney for State, Sanford W. Smith.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4151.

Supreme Court.

Summons and complaint issued November 6, 1896. March 27, 1897, case settled on payment of $50 and costs.

Attorney for State. A. B. Gardinier.

Witnesses: Charles Sears, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 4152.

Supreme Court.

Summons and complaint issued December 23, 1896. January 14, 1897, case settled on payment of penalty, $100 and costs.

Attorney for State: Sanford W. Smith.

Witnesses: Charles Sears, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 4154.

Supreme Court.

Summons and complaint issued December 24, 1896. August 31, 1897, case settled on payment of $50 and costs.

Attorney for State: Sanford W. Smith.

Witnesses: R. H. Palmer, Charles Sears, and chemist, E. J. Wheeler.

CASE No. 4155.

Supreme Court.

Summons and complaint issued December 24, 1896. January 10, 1897, case settled on payment of $101 and costs.

Attorney for State: Sanford W. Smith.

Witnesses: Charles Sears, R. H. Palmer, and chemist, E. J. Wheeler.

CASE NO. 4159.

Supreme Court.

Summons and complaint issued March 4, 1897. Case settled, March 31, 1897, on payment of $50 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: R. H. Palmer, Charles Sears, and chemist, E. J. Wheeler.

CASE No. 943.

Supreme Court.

Summons and complaint issued February 1, 1897. Case settled March 6, 1897, on payment of $50 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 944.

Supreme Court.

Summons and complaint issued February 1, 1897. Case settled March 6, 1897, on payment of $50 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 945.

Supreme Court.

Summons and complaint issued February 1, 1897. Case settled March 6, 1897, on payment of $50 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 949.

Supreme Court.

Summons and complaint issued February 1, 1897. Case settled March 6, 1897, on payment of $50 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 950.

Supreme Court.

Summons and complaint issued February 1, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1145.

Supreme Court.

Summons and complaint issued July 7, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 3012.

Supreme Court.

Summons and complaint issued May 24, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, and chemist, E. J. Wheeler.

CASE No. 3007.

Supreme Court.

Summons and complaint served September 30, 1897. Case still pending.

Attorney for State: A. R. Tompkins.

Witnesses: Henry S. Ambler, S. E. Lawler, and chemist, E. J. Wheeler.

CASE No. 4551.

Supreme Court.

Summons and complaint issued May 28, 1897. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: Charles Sears, M. T. Morgan, and chemist, E. J. Wheeler.

CASE No. 2874.

Supreme Court.

Summons and complaint issued June 5, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: R. H. Palmer, M. McDeighton, and chemist, E. J. Wheeler.

CASE No. 2873.

Supreme Court.

Summons and complaint issued June 4, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: R. H. Palmer, M. McDeighton, and chemist, E. J. Wheeler.

CASE No. 3013.

Supreme Court.

Summons and complaint issued January 2, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, John F. Sullivan, and chemist, E. J. Wheeler.

CASE No. 3014.

Supreme Court.

Summons and complaint issued July 2, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3016.

Supreme Court.

Summons and complaint served May 26, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3017.

Supreme Court.

Summons and complaint issued May 26, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3050.

Supreme Court.

Summons and complaint issued June 5, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: Walter J. Bennett, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 4920.

Supreme Court.

Summons and complaint issued May 17, 1897. July 7, 1897, notice of application for judgment served on defendant. July 17, 1897, judgment by default, $100 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: Henry S. Ambler, David Ewing, and chemist, E. J. Wheeler.

CASE No. 3027.

Supreme Court.

Summons and complaint issued May 27, 1897. July 17, 1897, judgment taken, $101.56 and costs.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3030.

Supreme Court.

Summons and complaint issued May 26, 1897. Case settled October 1, 1897, on payment of $50 and costs.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3031.

Supreme Court.

Summons and complaint issued May 26, 1897. Case settled June 22, 1897, on payment of $101.10 and costs.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3032.

Supreme Court.

Summons and complaint issued May 27, 1897. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3033.

Supreme Court.

Summons and complaint issued May 27, 1897. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3035.

Supreme Court.

Summons and complaint issued July 14, 1897. July 26, 1897, case settled on payment of $100 and costs.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3039.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3040.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3041.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3042.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3043.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3044.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3045.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3046.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3047.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3048.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: D. W. Ostrander.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 4928.

Supreme Court.

Summons and complaint served June 14, 1897. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, Winnie St. John, and chemist, E. J. Wheeler.

CASE No. 2673.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: L. W. Baxter.

Witnesses: R. H. Palmer, W. E. Finkie, and chemist, E. J. Wheeler.

CASE No. 3049.

Supreme Court.

Summons and complaint issued May 25, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4927.

Supreme Court.

Summons and complaint issued August 18, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4903.

Supreme Court.

Summons and complaint served June 15, 1897. September 27, 1897, defendant pleaded guilty before Court of Special Sessions; fined $50 and costs.

Attorney for State: W. C. Daley.

Witnesses: M. Dugan, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 4904.

Supreme Court.

Summons and complaint issued May 25, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 4929.

Supreme Court.

Summons and complaint issued May 25, 1897. September 7, 1897, case settled on payment of $50 and costs.

Attorney for State: W. C. Daley.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4930.

Supreme Court.

Summons and complaint issued May 25, 1897. September 7, 1897, case settled on payment of penalty, $100 and costs.

Attorney for State: W. C. Daley.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4932.

Supreme Court.

Summons and complaint issued May 24, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4933.

Supreme Court.

Summons and complaint issued May 25, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: H. S. Ambler, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4934.

Supreme Court.

Summons and complaint issued May 25, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: W. J. Bennett, H. S. Ambler, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4935.

Supreme Court.

Summons and complaint issued May 25, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 948.

Supreme Court.

Summons and complaint issued May 25, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: M. Dugan, H. S. Ambler, W. J. Bennett, and chemist, E. J. Wheeler.

CASE No. 4905.

Supreme Court.

Summons and complaint issued August 17, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 4908.

Supreme Court.

Summons and complaint issued July 14, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 4921.

Supreme Court.

Summons and complaint issued July 14, 1897. No appearance or answer to complaint.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 4923.

Supreme Court.

Summons and complaint issued June 2, 1897. Case still pending.

Attorney for State: W. C. Daley.

Witnesses: W. J. Bennett, Wm. Longwell, and chemist, E. J. Wheeler.

CASE No. 2654.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, James W. Barrett, and chemist, E. J. Wheeler.

CASE No. 2655.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, James W. Barrett, and chemist, E. J. Wheeler.

CASE No. 2656.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, Calvin Burrows, and chemist, E. J. Wheeler.

CASE No. 2657.

Supreme Court.

Summons and complaint issued July 14, 1897. No appearance or answer to complaint.

Attorney for State: A. B. Gardinier.

Witnesses: R. H. Palmer, Wm. P. Knapp, and chemist, E. J. Wheeler.

CASE No. 2659.

Supreme Court.

Summons and complaint issued July 14, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: R. H. Palmer, Wm. R. Tehune, and chemist, E. J. Wheeler.

CASE No. 1137.

Supreme Court.

Summons and complaint served July 7, 1897. Defendant dead.

Attorney for State: A. B. Gardinier.

CASE No. 1140.

Supreme Court.

Summons and complaint issued July 14, 1897. Case still pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4915.

Supreme Court.

Summons and complaint issued July 16, 1897. **Case still pending.**

Attorney for State: A. B. Gardinier.

Witnesses: M. Dugan, Dewitt Birdsell, and chemist, E. J. Wheeler.

CASE No. 2668.

Supreme Court.

Summons and complaint issued and served. **Case still pending.**

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 4909.

Supreme Court.

Summons and complaint issued July 14, 1897. **Case still pending.**

Attorney for State: A. B. Gardinier.

Witnesses: M. Dugan, W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1141.

Supreme Court.

Summons and complaint issued August 17, 1897. **Case still pending.**

Attorney for State: Wm. C. Daley.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1143.

Supreme Court.

Summons and complaint issued August 17, 1897. Case still pending.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1144.

Supreme Court.

Summons and complaint issued August 16, 1897. September 1, 1897, case settled on payment of $50 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 2976.

Supreme Court.

Summons and complaint served August 16, 1897. September 1, 1897, case settled on payment of $50 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 2977.

Supreme Court.

Summons and complaint issued August 16, 1897. September 2, 1897, case settled on payment of $50 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 2978.

Supreme Court.

Summons and complaint issued August 16, 1897. September 2, 1897, case settled on payment of $50 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 4926.

Supreme Court.

Summons and complaint issued April 16, 1897. September 1, 1897, case settled on payment of $50 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 2984.

Supreme Court.

Summons and complaint issued August 16, 1897. Case still pending.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, Geo. P. Lansberry, and chemist, E. J. Wheeler.

CASE No. 2985.

Supreme Court.

Summons and complaint issued August 16, 1897. Case still pending.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, Geo. P. Lansberry, and chemist, E. J. Wheeler.

CASE No. 2986.

Supreme Court.

Summons and complaint issued August 16, 1897. Case still pending.

Attorney for State: Wm. C. Daley.

Witnesses: W. J. Bennett, Geo. P. Lansberry, and chemist, E. J. Wheeler.

CASE No. 3004.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 3025.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2676.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3005.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 3020.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2979.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $50 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2980.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $100 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2981.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $100 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2982.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of penalty, $100 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2983.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $50 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2991.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2992.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of penalty, $100 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2993.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $50 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2994.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $60 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2665.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: J. P. Allds.

Witnesses: R. H. Palmer, Wm. Crothy, and chemist, E. J. Wheeler.

CASE No. 2990.

Supreme Court.

Summons and complaint issued August 16, 1897. Case still pending.

Attorney for State: Wm. B. Daley.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2693.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: L. W. Baxter.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2696.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $100.

Attorney for State: L. W. Baxter.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2697.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $100 and costs.

Attorney for State: L. W. Baxter.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2999.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: L. W. Baxter.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3000.

Supreme Court.

Summons and complaint issued and served. Case to be settled December 30, 1897.

Attorney for State: L. W. Baxter.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 3006.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled on payment of $100 and costs.

Attorney for State: L. W. Baxter.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5351.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5352.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5353.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5354.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5355.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5356.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5357.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5321.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: A. D. Lent.

Witnesses: M. Dugan, W. J. Bennett, W. B. Mynderse, and chemist, E. J. Wheeler.

CASE No. 5322.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: A. D. Lent.

Witnesses: M. Dugan, W. J. Bennett, and chemist, E. J. Wheeler.

CASE No. 5331.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: A. D. Lent.

Witnesses: W. B. Mynderse, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5360.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: Oliver Carpenter, Jr.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5361.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: Oliver Carpenter, Jr.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5362.

Supreme Court.

Summons and complaint issued and served. Case still pending.

Attorney for State: Oliver Carpenter, Jr.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2677.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled.

Attorney for State: P. Edgar Ackert.

Witnesses: R. H. Palmer, John Crowley, and chemist, E. J. Wheeler.

CASE No. 2686.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled.

Attorney for State: P. Edgar Ackert.

Witnesses: R. H. Palmer, Theodore Cooke, and chemist, E. J. Wheeler.

CASE No. 5323.

Supreme Court.

Summons and complaint issued and served. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: M. Dugan, David Thompson, and chemist, E. J. Wheeler.

CASE No. 5363.

Supreme Court.

Summons and complaint issued and served. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5364.

Supreme Court.

Summons and complaint issued and served. September 30, 1897, case settled, on payment of $25 and costs.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5365.

Supreme Court.

Summons and complaint issued and served. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5366.

Supreme Court.

Summons and complaint issued and served. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5367.

Supreme Court.

Summons and complaint issued and served: Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE 5309.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5310.

Supreme Court.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5312.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5313.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5314.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5316.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5317.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5318.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5319.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 5320.

Supreme Court.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 2694.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5335.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5341.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5345.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5346.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5347.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5348.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5349.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5350.

Supreme Court.

Witnesses: M. Dugan, E. F. Burke, and chemist, E. J. Wheeler.

CASE No. 5325.

Supreme Court.

Summons and complaint served. Case still pending.

Attorney for State: Henry W. Alden.

Witnesses: W. J. Bennett, M. Dugan, and chemist, Theo. J. Bradley.

CASE No. 5326.

Supreme Court.

Summons and complaint served. Case still pending.

Attorney for State: Henry W. Alden.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 2880.

Supreme Court.

Summons and complaint served. Case still pending.

Attorney for State: Henry Van Hoesen.

Witnesses: R. H. Palmer, Patrick Shell, and chemist, Theo. J. Bradley.

CASE No. 2681.

Supreme Court.

Summons and complaint issued. Case still pending.

Summons and complaint issued. September 30, 1897, case still pending.

Attorney for State: Henry Van Hoesen.

Witnesses: R. H. Palmer, Frank Highby, and chemist, Theo. J. Bradley.

CASE No. 2881.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Henry Van Hoesen.

Witnesses: R. H. Palmer, A. W. Snyold, and chemist, Theo. J. Bradley.

CASE No. 5372.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Henry Van Hoesen.

Witnesses: W. J. Bennett, F. C. Slaughter, and chemist, E. J. Wheeler.

CASE No. 5751.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, F. C. Slaughter, and chemist, E. J. Wheeler.

CASE No. 5752.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, F. C. Slaughter, and chemist, E. J. Wheeler.

CASE No. 5753.

Summons and complaint issued. Case pending.

Attorney for State: Henry Van Hoesen.

Witnesses: F. C. Slaughter, James McWilliams, and chemist, E. J. Wheeler.

CASE No. 5761.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, F. C. Slaughter, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5762.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, F. C. Slaughter, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5763.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, F. C. Slaughter, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5766.

Supreme Court.

Summons and complaint served. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, F. C. Slaughter, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 5327.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: H. W. Alden.

Witnesses: M. Dugan, F. C. Slaughter, and chemist, E. J. Wheeler.

CASE No. 5735.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: H. W. Alden.

Witnesses: F. C. Slaughter, M. Dugan, and chemist, E. J. Wheeler.

VINEGAR.

The following statement represents prosecutions commenced during the year ending September 30, 1897, under the Agricultural Law relating to the sale of impure and adulterated vinegar, and the present status of the cases:

CASE No. 893.

Supreme Court.

Summons and complaint issued July 14, 1897. September 30, 1897, case dismissed. Defendants not real party in interest.

Attorney for State: S. W. Smith.

Witnesses: Chas. Sears, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 894.

Supreme Court.

Summons and complaint issued July 13, 1897. Case pending.

Attorney for State: S. W. Smith.

Witnesses: Chas. Sears, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 91.

Supreme Court.

Summons and complaint issued June 5, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 90.

Supreme Court.

Summons and complaint issued March 31, 1897. September 30, 1897, case settled on payment of $28.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 87.

Supreme Court.

Summons and complaint issued March 31, 1897. October 2, 1897, case settled on payment of $30.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1146B.

Supreme Court.

Summons and complaint issued March 31, 1897. October 9, 1897, case settled on payment of $25 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1149B.

Supreme Court.

Summons and complaint issued April 2, 1897. October 29, 1897, case settled on payment of $25 and costs.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1827.

Supreme Court.

Summons and complaint issued March 31, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 97.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 98.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 100.

Supreme Court.

Summons and complaint issued June 3, 1897. September 30, 1897, case settled on payment of $50 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 1862.

Supreme Court.

Summons and complaint issued June 3, 1897. September 30, 1897, case settled on payment of $50 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 1864.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Daley.

Witnesses: R. H. Palmer, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 466.

Supreme Court.

Summons and complaint issued June 3, 1897. September 30, 1897, case settled on payment of $25 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: R. H. Palmer, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 453.

Supreme Court.

Summons and complaint issued July 12, 1897. No appearance or answer to complaint.

Attorney for State: Wm. B. Daley.

Witnesses: R. H. Palmer, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 587.

Supreme Court.

Summons and complaint issued May 25, 1897. Case still pending.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 588.

Supreme Court.

Summons and complaint issued March 3, 1897. September 30, 1897, case settled on payment of penalty, $102 and costs.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 589.

Supreme Court.

Summons and complaint issued May 25, 1897. Case pending.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 590.

Supreme Court.

Summons and complaint issued May 25, 1897. Case pending.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 591.

Supreme Court.

Summons and complaint issued May 25, 1897. Case pending.

Attorney for State: Wm. B. Daley.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 88.

Supreme Court.

Summons and complaint issued July 13, 1897. Case pending.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1839.

Supreme Court.

Summons and complaint issued July 13, 1897. Case pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1840.

Supreme Court.

Summons and complaint issued July 13, 1897. Case pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and Chemist, E. J. Wheeler.

CASE No. 1842.

Supreme Court.

Summons and complaint issued July 13, 1897. Case pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1844.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1845.

Supreme Court.

Summons and complaint issued July 13, 1897. Case pending.

Attorney for State: S. W. Smith.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1851.

Supreme Court.

Summons and complaint issued July 13, 1897. Case pending.

Attorney for State: S. W. Smith.

Witnesses: Walter J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 625.

Supreme Court.

Summons and complaint served. Case pending.

Attorney for State: J. P. Allds.

Witnesses: M. Dugan, H. S. Ambler, and chemist E. J. Wheeler.

CASE No. 603.

Supreme Court.

Summons and complaint served. Case pending.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 604.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 605.

Supreme Court.

Summons and complaint issued. September 30, 1897, case settled.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 606.

Supreme Court.

Summons and complaint issued. September 30, 1897, case settled.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 607.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 914.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Oliver Carpenter, Jr.

Witnesses: Chas. Sears, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1871.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Oliver Carpenter, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 610.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1875.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 612.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1856.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Harry W. Alden.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

Case No. 1873.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Harry W. Alden.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1876.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Harry W. Alden.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 609.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Wait.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 611.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Wm. B. Wait, Jr.

Witnesses: Walter J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1870.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: Henry Van Hoesen.

Witnesses: R. H. Palmer, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 467.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 592.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 601.

Supreme Court.

Summons and complaint issued. Case still pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1832.

Supreme Court.

Summons and complaint issued. Case still pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1833.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1834.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1835.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1836.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1837.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1838.

Supreme Court.

Summons and complaint issued. Case pending.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

OLEOMARGARINE.

The following statement represents prosecutions commenced during the year ending September 30, 1897, under the Dairy Law and Agricultural Law, relating to the fraudulent sale of oleomargarine and the present status of the cases:

CASE No. 1521.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1671.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: M. Dugan, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 95.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 1506.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: Chas. Sears, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 1507.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: Chas. Sears, R. H. Palmer, and chemist, E. J. Wheeler.

CASE No. 100.

Supreme Court.

Summons and complaint issued. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: R. H. Palmer, Chas. Sears, and chemist, E. J. Wheeler.

CASE No. 97.

Supreme Court.

Summons and complaint issued April 3, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 1663.

Supreme Court.

Summons and complaint issued April 3, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, Chas. Sears, M. Dugan, and chemist, E. J. Wheeler.

CASE No. 87.

Supreme Court.

Summons and complaint issued March 31, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, M. Dugan, Chas. Sears, and chemist, E. J. Wheeler.

CASE No. 1662.

Supreme Court.

Summons and complaint issued April 7, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, Chas. Sears, and chemist, E. J. Wheeler.

CASE No. 1661.

Supreme Court.

Summons and complaint issued April 6, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, Chas. Sears, and chemist, E. J. Wheeler.

CASE No. 1659.

Supreme Court.

Summons and complaint issued April 2, 1897. Case pending.

Attorney for State: A. B. Gardinier.

Witnesses: W. J. Bennett, Chas. Sears, and chemist, E. J. Wheeler.

CASE No. 4936.

Supreme Court.

Summons and complaint served. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

CASE No. 4937.

Supreme Court.

Summons and complaint served. Case pending.

Attorney for State: P. Edgar Ackert.

Witnesses: W. J. Bennett, H. S. Ambler, and chemist, E. J. Wheeler.

REPORT OF T. JAMES OWENS.

Hon. Chas. A. Wieting, *Commissioner of Agriculture:*

Dear Sir.—I have the honor to make my second annual report of work performed in the service of the Department of Agriculture, of the Fourth Division, comprising the counties of Essex, Fulton, Hamilton, Herkimer, Montgomery, Oneida, Oswego and Warren, for the year ending September 30, 1897.

Number of specimens of milk examined	8,589
Number of creameries examined	66
Number of dairies examined	6,142
Number of condensaries examined	1
Nnmber specimens of vinegar examined	476
Number samples of milk taken to chemist for analysis	25
Number samples of vinegar taken to chemist for analysis	2

The following is a list of samples taken during the year, which, upon analysis, were found to be below the State standard:

MILK.	Label No.
Allen P. Cook, Tabery	2556
William Parsons, Ava	3990
John Holland, Westernville	3948
Charles Hooper, Mexico	2557
D. C. Huntly, West Exeter	3756
Mary A. Griffin, East Winfield	3900
Peter Ganghran	3966
James C. Baldwin, Stockwell	3960
J C. Mason, Waterville	3978
Jacob Morrison, Pulaski	2576
A. Rimiller, Lowell	3905
Caleb Lund, Hannibal	2686
Moses I. Burrns, Hannibal	2508
Harry McPherson, Pulaski	2591
George Chapman, Hinmansville	2598
A. Button, Little Utica	2596
Emma A. Kessler, Hinmansville	2594
Frank Weis, Granby	2593
Henry Fuller, Oswego Falls	2592
James Atkinson, Gilbert's Mills	2591
Mrs. John Houlihan, Florence	4991

Prosecutions.

MILK.

LABEL No. 2328.

Defendant appeared, pleaded guilty and was fined $25 by Wm. H. Williams, Esq., of Steuben.

LABEL No. 3951.

Plead guilty and was fined $75.
Witnesses: Geo. D. Babcock and Wm. Manlius Smith.

LABEL No. 2506.

Plead guilty and was fined $25.
Witnesses: Geo. D. Babcock and Wm. Manlius Smith.

LABEL No. 3760.

Paid penalty of $100.
Witnesses: M. T. Morgan, and Theo. Deeke, chemist.

LABEL No. 3967.

Paid penalty of $100.
Witnesses: Robt. McAdam, Jr., and Theo. Deeke, chemist.

LABEL No. 3968.

Mrs. Griffith was in no way responsible for the adulteration, and the action against her was withdrawn.

LABEL No. 2503.

Convicted on plea of guilty before A. W. Craig, justice of the town of Camden, January 8, 1897. Fine, $25 or twenty-five days in jail. Served in Rome jail.

Same. Action in Supreme Court to recover penalty. Judgment entered April 12, 1897, for $129.39, penalty and costs.

LABEL No. 2504.

Supreme Court action to recover penalty. Answer interposed and case tried before Hon. S. C. Huntington, reference at Parish, N. Y. May 3-8, 1897. Decision rendered August 6th in favor of the People, and judgment entered August 4th for $100 penalty and $145.26 costs, $245.26 total judgment. Supplementary proceedings initiated and settled case for $110.

LABEL No. 2505.

Supreme Court action to recover penalty commenced December 9, 1896. Settled case December 26, 1896, for $50.

LABEL No. 2508.

Supreme Court action to recover penalty commenced September 10, 1897. An answer has been interposed, and case now at issue.

LABEL No. 2599.

Action commenced and settled for $50, October 20, 1897.

LABEL No. 3760.

Case settled by paying penaley of $100.

LABEL No. 3975.

Case now under investigation.

LABEL No. 3976.

Case now under investigation.

LABEL No. 2596.

Action discontinued.

LABEL No. 2594.

Case under investigation.

LABEL No. 2593.

Settled for $25.

LABEL No. ——.

Settled for $25.

VINEGAR.

LABEL No. 113.

Case settled by paying penalty of $50. Total fines paid, $825. Judgments not collected, $154.39.

MILK.

LABEL No. 2600.

Settled for $50, October 20, 1897.

LABEL No. 3755.

Supreme Court action to recover penalty commenced October 22, 1897. Action now pending.

LABEL No. 3951.

Supreme Court action to recover penalty commenced December 11, 1896. Settled February 18, 1897, for $50.

LABEL No. 3952.

Case now under investigation.

LABEL No. 3964.

Supreme Court action to recover penalty commenced December 9, 1896. Settled May 6, 1897, for $40.

LABEL No. 4951.

Supreme Court action to recover penalty November 4, 1897. Settled November 5, 1897, for $50.

LABEL No. 3989.

Supreme Court action to recover penalty commenced November 24, 1897. Settled November 27, 1897, for $50.

No epidemics of any kind have occurred among the cattle or swine of this district during the past year.

Respectfully submitted,

T. JAMES OWENS,

Assistant Commissioner.

REPORT OF S. BROWN RICHARDSON.

Hon. CHARLES A. WIETING, *Commissioner of Agriculture:*

Dear Sir.—I have the honor to submit herewith my second annual report as Assistant Commissioner of Agriculture for the Fifth Division of the Department of Agriculture of the State of New York.

In submitting this report it is my intention to show the ground covered and, in a measure, the results obtained by one year's work ending September 30, 1897.

In this division the work has to do chiefly with giving instruction to butter and cheese makers, in all branches of their work, and in detecting violations of the Agricultural Law. Included in the former is a large amount of work performed in testing milk for fats, by the Babcock method, and by the specific gravity test for solids. The work has been thoroughly done, and I am convinced, after most careful investigation, that the butter and cheese instructors of this division, as well as the inspectors, are competent to uphold the law by giving most trustworthy decisions as to the legal status of milk after a few minutes' examination. I am confirmed in this belief by the practical results of a method adopted by me some months since for the reports made me by the men employed in this division, at the time of taking suspected samples of milk for analysis to the State chemist.

There are scientific formulas laid down by the accepted authorities on milk and its component parts, by the application of which, when the specific gravity and the percentage of fats in the milk are known, we may determine the solids not fat and, hence, the total solids, with such a degree of accuracy that the result, when compared with a subsequent chemical analysis, will practically agree with it. In this division the inspectors are required to work out the amount of solids by the above formulas and show the percentage of water added in the case of every sample taken. This work is sent to me before the sample is taken to the chemist; and when I get the analysis from the chemist I am able, by comparison of the reports of the inspector with the actual chemical analysis, to determine the proficiency of the inspector and his good judgment in detecting violations of the Agricultural Law. It is, I think, important to state that the variations found in comparing these results have, in all cases, been very slight. I give below the actual results obtained in two cases—the first of which, known as case No. 4511, was made by Agent R. R. Kirkland; and the second, known as case No. 4519, was made by Agent C. S. Kellogg:

CASE No. 4511.

Per cent. of fat shown by Babcock, 2.4.

Ordinary lactometer reading, 78 degrees; temperature, 58 degrees.

Corrected lactometer reading, 77.22 degrees.

Quevenne, 22.24 degrees.

Specific gravity, 1.02242.

Applying Babcock's formula, in which S equals solids not fat, and F equals the fat—

$$S \text{ equals } \frac{22.42 \text{ plus } F}{3.8} \text{ equals } 6.34.$$

S plus F equals $6.34 + 2.4 = 8.74$ per cent. of total solids.

To recapitulate, the mechanical determination of total solids, as found by Mr. Kirkland in case No. 4511, was 8.74, while the chemical analysis furnished later by Chemist J. C. Wilson, showed the total solids in this case to be 8.71 per cent.

CASE No. 4519.

Per cent. of fat shown by Babcock, 3.4.

Ordinary lactometer reading, 90 degrees; temperature, 62 degrees.

Corrected lactometer reading, 90.66 degrees.

Quevenne lactometer reading, 26.29 degrees.

Specific gravity, 1.02629.

Applying formula as above—

$$S \text{ equals } \frac{26.29 \text{ plus } F}{3.8} \text{ equals } 7.53.$$

Totals solids equals $7.53 + 3.4 = 10.92$ per cent.

In this case the mechanical determination shows 10.92 per cent. of total solids, while the chemical analysis of Chemist Wilson makes the total solids 10.90.

It appears from case No. 4511 that the chemist made the total solids 3-100 of 1 per cent. less than the determination by formula made by Agent Kirkland; and from case No. 4519, that the chemist made the total solids .03 of 1 per cent. less than the determination by formula made by Agent Kellogg. These cases are taken at random, and are believed to represent about an average of the amount of variation found in the two methods of determination.

In my last report I took occasion to inform you of the inability of the force of butter and cheese instructors to attend to the calls for assistance from the butter and cheese factories of this division. Our inability to do this part of the work justice has been demonstrated many times during the past year. I am of the opinion that a few extra men, as instructors during the summer months, would add much to the efficiency of the service and would add many times its cost to the value of the butter and cheese product of northern New York.

I have had, during the past year, several applications for State aid in suppressing so-called contagious diseases among cattle and swine; but upon investigation I have been able to assign local conditions as the cause of these disturbances, and when the cause was removed normal health appeared; and, except in one case, I have not deemed it necessary to ask you for expert assistance.

There was a good representative display of butter and cheese made at the annual meeting of the State Agricultural Society, held at Syracuse, August 23d to 28th, and the results obtained by comparing our butter and cheese product with that of other divisions and of other States reflect much credit on the Department for the high grade and uniform product established by the instructors to the Department in the manufacture of butter and cheese by their most excellent system.

The activity of the experts and agents in detecting and bringing to punishment the violators of the law relating to the manufacture and sale of oleomargarine has, in my opinion, practically eradicated the sale of that vicious butter substitute from the fifth agricultural division. It is, however, with much apprehension that I notice the increase in the sale of what is known as "process butter" in the cities and larger villages of northern New York. It seems to me the duty of our Senators and Representatives to determine, if possible, whether or not this low-grade butter preparation is deleterious to the health of our people, and if so, to enact measures to prohibit the sale of it in this State. It is certain that the importation of process butter from other States has already created a most depressing effect upon the value of dairy butter in our local markets, and it is these markets that our farm dairies must look to for the sale of early spring and late fall butter, made before the opening and after the closing of co-operative butter and cheese factories.

It is with much pleasure that I have observed the persistent efforts made by the Department in the direction of giving protection to our State brand for branding cheese. The continued practice of unprincipled dealers in other States of making fraudulent use of cheese brand robs our farmers first, of their trade, and next, of their reputation—the latter by discrediting the quality of our cheese brought about by placing our official State brand upon the inferior cheese made in other sections of our country, less favored by conditions necessary to the manufacture of fancy cheese.

The frequent meetings of all assistant commissioners held at the office in Albany during the past year, has, I think, been the means of unifying and systematizing the work of the Department by solving many practical questions and by imparting to all a more comprehensive knowledge of the best methods of putting the Agricultural Law into execution. About twenty violations of the law have been detected in the fifth division during the year, and of this number about 75 per cent. have paid the penalty prescribed by law without the necessity of a trial.

The details of the work performed in the five counties of the fifth agricultural division have been practically a reproduction of those of former years. During the early summer months, and in fact up to, and, to a degree, into the month of August, cheese makers are always troubled with gassy milk, off-flavored butter and cheese, and a variety of ills incident to the production of milk, and the products of milk, in hot weather. Early and late the instructors and agents in this division have labored to better these products by showing the absolute necessity of governing conditions and environments. An oral lesson on the elementary science of bacteriology sometimes does more for a "germ-ridden" cheese maker than years of hard labor in the dark.

A trusted instructor in this agricultural division in June last reported as follows:

> "During the last month the weather has been very warm and the makers have had much trouble with tainted or gassy milk and floating curds. This trouble appears every year with the advent of hot weather, and can, in my opinion, never be entirely eradicated until not only the cheesemaker, but, before him, the farmer, at home, pays more attention to the care of milk and the details of milk production."

I believe this instructor is right, and we are working on the theory contained in his statement. We are teaching, first of all, the great lesson of cleanliness; from the cloths of the milker to the pails he milks into, the strainers, cans, stables, etc. The farmer who does not observe all these conditions, and who does not deliver his milk to the butter factory or cheese factory in prime order, robs the cheese or butter maker of his ability to make fancy butter or fancy cheese.

During the months of June and July my force of instructors was entirely inadequate to answer all calls for help. One instructor can only attend to one call a day, and many days during the hot weather I have five or six calls for assistance.

During the past year I have given close attention to the law regarding vinegar, with the result that I now believe very few, if any, violations of the statute regarding vinegar are now practiced in the fifth division. In February last a car of vinegar was shipped to the city of Watertown of a quality not in accordance with the laws of the State. The consignees, however, finding that it could not be legally sold, returned it to the consignors.

In the spring of 1897 I invited all the instructors in cheese-making of the State to meet at Lowville in this division for the purpose of comparing notes, and demonstrating, in a practical way, any interesting features of their individual experiences during the previous summer that might benefit them all. Each instructor in turn made a vat of home trade cheese and a vat of export cheese during the week, under a fire of critical questions from all the rest. I am of the opinion that much practical good came of this meeting, and that several knotty points were settled at the factory at Lowville that week. All milk delivered at the factory that week was tested, weighed and graded as to the percentage of fats. Each vat contained the same amount of milk as to weight, but the milk in each vat differed from the milk in other vats as to the percentage of butter fats. The amount of green cheese produced by vats of milk varying in the percentage of butter fats, made a very interesting study. The results obtained were published at that time, and are now a matter of record at the Department of Agriculture at Albany.

The amount of benefit we can do, and the measure and duration of that benefit, depends very largely upon the intelligence of the people whom we endeavor to instruct. It is hence very gratifying to me to be able to inform you that progressive methods have been adopted and are being practiced in nearly all the cheese factories and creameries in this division, with the result that the standard of quality in these products is very high, and is so recognized by all dealers in, and consumers of, dairy products.

I notice with much satisfaction that in factories where milk inspections were made last year, and more particularly where we discovered violations of the agricultural laws, caused by the addition of water to the milk, or by skimming before it was delivered at the factory, there is a marked improvement in the quality of the milk delivered this year, and also in the quality of the product of such factories. It is also observable that people seem to be educated up to the fact that the milk standard adopted by the State of New York in 1884 was a just one, and that while all consumers of milk in the cities of this division are getting purer milk of better quality than they received before any standard was adopted, still all producers of milk are enjoying the advantages of a greater market, made available by the great increase in the amount of milk consumed.

I am of the opinion that a very small minority of milk peddlers and milk dealers in the fifth agricultural division would now vote to abolish the milk standard if an opportunity to do so were offered to them.

I herewith submit for your consideration the report of W. W. Hall, dairy instructor, in regard to the work done in this division during the year. This report goes further into details of the work done by him during the year than I have done.

REPORT OF W. W. HALL.

Hon. S. B. RICHARDSON, *Assistant Commissioner of Agriculture:*

Dear Sir.—I have the honor to submit this my tenth annual report as dairy instructor of the work done in the fifth division of the Department of Agriculture for the year ending September 30, 1897.

On October 1, 1896, I made a trip to Clinton county to inspect milk delivered to the creameries of A. D. Boomhower, of Plattsburgh, N. Y. He owns butter and cheese factories all the way from Cherubusco, along the line of the O. & L. C. R. R., to Rouses Point, and along the line of the D. & H. R. R. to Peru. His milk last season was received on the patron plan in many of his factories and it was paid for by the hundred pounds. October 5th, I made an inspection in his Turnpike creamery, near West Beekmantown, and found two samples of milk below the standard fixed by law. I very carefully made duplicate samples of each patron's milk so found; delivered one to each owner and took the other to the chemist for analysis. The sample was taken at 7 a. m., October 5th, and duplicate samples reached the chemist at Canton, October 6th, 7.30 a. m. Analysis by the chemist assisted by the Babcock formula, being in both cases below standard milk. These cases were settled by paying the penalty prescribed by law.

October 8th, I attended a meeting of the Assistant Commissioners of Agriculture in the Albany office, at which time the method of conducting milk inspection was thoroughly discussed and a safe, reliable, "up-to-date" plan was decided upon. Errors in conducting milk inspection in butter and cheese factories were decided by those present to be unnecessary, and they agreed upon a plan which is, without doubt, very reliable. On my return from Albany, I rode over quite a portion of St. Lawrence county making inspections, and at the same time giving instructions to both butter and cheese makers.

The twelfth of November, another meeting was called in Albany for discussion of dairy matters, and from there I went to New York city and spent two weeks under the direction of Assistant Commissioner Kracke in inspecting butter and milk throughout "Greater New York." I returned to Albany, November 27th, to attend another meeting at the Albany office and to report the New York city trip. Nothing of importance took place while I was in Mr. Kracke's district, yet I was out almost every day while I was there examining milk and butter. I found fine butter in the refrigerators at every store I visited, and I was disappointed in not finding any samples of oleomargarine and diluted milk, but in every case the quality of the product was fine.

I spent the greater part of the month of December attending farmers' institutes and preparing my annual report, excepting the time spent in court. December 7th, I went to Plattsburgh to attend court as a witness in the case of the People. v. Henry

McCrea. Defendant did not appear and a judgment was taken. The cases of the People v. Louis Bolia and John McLoon were settled. These cases were brought by the People of the State for delivering illegal milk to creameries in Clinton county. Label No. 2209, People v. Henry McCrea, sample taken August 8, 1896. Label 2216, People v. McLoon, sample taken October 5, 1896. Label No. 2217, People v. Bolia, sample taken October 5, 1896.

On January 1, 1897, Commissioner Wieting assigned me to take charge of the cheese department of the dairy school at Cornell University. I was engaged in this work during the months of January, February and March.

During the month of April I did such work as was authorized by yourself and Commissioner Wieting to assist in preparing for the work of the different bureaus of our Department for the season.

On September 1st, I began active work again under your direction, the first being at Crystal Spring cheese factory in this town. I made a thorough inspection of the milk received, then gave instruction by actual process, explaining in detail the reasons for each and every step from the time the milk was received until the cheese was placed on the shelves.

From there I went to Hannibal, Oswego county, and gave instruction in the cheese factory at that village. I was sent there on a special call.

September 10th, I made an inspection of milk in the Rensselaer Falls cheese factory, St. Lawrence county. The following is a detailed report of the inspection:

The lactometer only was used except in a few cases where suspicion followed the lactometer test. The weather was very warm the night previous and the temperature was so high that corrections were very difficult to make and obtain the specific gravity with any degree of accuracy. I call your attention to patron No. 38, in the following test, the lactometer reading being 94 at a temperature of 76 degrees F. I cooled the milk to 60 degrees and found a specific gravity of 1.029. I also found 3.6 per cent. of fat. I applied the following formula:

$$\text{Solids not fat} = \frac{L + .7\,f}{3.8} \text{ and}$$

$$\text{Total solids} = \frac{L + .7\,f + f}{3.8}$$

and found 11.90 per cent. of total solids. I took a sample to Chemist Wilson to satisfy myself as to whether it was legal milk, and he reported 11.88 per cent. total solids. I went back again to be sure of my ground, and found the same condition as before: Specific gravity, 1.029; fat, 3.6 per cent.; total solids, 11.90 per cent. The patron becoming a little alarmed by my return, acknowledged to the cheese maker that he found his wife had been watering their milk. Had I made the inspection in June, I should have taken no notice of the specific gravity, as at that season of the year there would be many herds giving milk of same specific gravity as that of patron No. 39, and be free from adulteration; but on the 10th of September, eight months from the lactation period, I doubt if any herd will produce milk with a specific gravity like No. 38 and total solids as low as 11.90 per cent. I am very sure there are no such herds.

On September 21st, I inspected the milk from the West Canton cheese factory. I found no samples below standard, and made both a specific gravity and fat test, giving the per cent. of fat, solids not fat and total solids of each patron's milk, together with the specific gravity of each. I also gave instructions in cheese making at this factory on the same day.

September 23d, I inspected milk at the Keystone Creamery, Lisbon. I had just taken a sample of milk from the can of patron No. 24 the week previous and found it to be below the standard. I refer to Label No. 876, People v. Hatley. At the first trial the milk tested as follows:

Ordinary lactometer, 92; temperature, 72.
Corrected lactometer reading, 96.
Specific gravity, 1.02774.
Fat per cent., 3.20.

27.74 + 2.24 = 29.98.

29.98 ÷ 3.8 = 7.89 solids not fat.

7.89 + 3.20 = 11.09 total solids.

11.09 ÷ 12 = 92.40 lbs. legal milk in 100 lbs. tested.

100 — 92.40 = 7.60 lbs. of added water.

7.60 × 100 = 760.00 ÷ 92.40 = 8.22 per cent. added water.

Notice second inspection on the 23d of September. Patron No. 24 has an entirely different record.

Ordinary lactometer corrected, 105.

Specific gravity, 1.02958.

Per cent. fat, 4.20.

29.58 + .7 fat found 2.84 = 32.42.

32.42 ÷ 3.8 = 8.53 solids not fat.

8.53 + 4.20 per cent fat = 12.73 total solids.

12.73 × 100 = 1273 ÷ 12 = 106, showing the improvement in milk.

From September 15th to September 23d, 100 lbs. of his milk unadulterated is equal to 106 lbs. of standard milk, while only 92.40 of standard milk was found in 100 lbs. of the milk he delivered on September 15th.

NUMBER OF PATRON.	Number of cows.	Pounds of milk.	Lactometer reading.	Temperature.	Corrected lactometer reading.
12	8	121	102	68	105
4	12	201	108	65	110
11	11	149	102	69	105
36	26	310	102	69	105
37	10	159	102	67	104
24	10	152	102	69	105
9	19	210	98	72	102
17	14	201	106	63	107
5	28	434	102	69	105
10	10	178	101	70	105
16	21	293	100	68	103
15	16	219	104	67	106
29	10	133	100	67	103
18	15	249	100	72	104
22	25	393	101	68	104
33	11	145	104	69	107
32	5	65	103	68	106
7	14	174	104	70	108
38	12	182	105	72	109
30	11	168	104	68	107

September 24th, I made an inspection of milk at Excelsior Creamery, Lisbon, N. Y. The butter maker at this creamery does his work in modern style and is in every way a success. Parties in Boston purchase the milk and employ Mr. Mayne to make the butter. At the time of my visit he was paying 70 cents per hundred pounds for milk that was being delivered at this creamery. Patron No. 29, in the following report of the test, has a specific gravity of 1.032, and his milk tested 3.4 per cent. fat, while patron No. 20 has a specific gravity of 1.0312 and 4.5 per cent. fat. The Boston parties were paying for a pound of fat in the case of patron No. 29, .2059 cents and in the case of patron No. 20 they paid only .1555 cents. In the milk of patron No. 29 we find 9.15 per cent. of solids not fat and in the milk of patron No. 20 we find 9.04 per cent. of solids not fat. In sample No. 29 we have 12.55 per cent. of total solids and in the sample No. 20 we have 13.55 per cent. of total solids. It is plain to any one who will follow the above figures that the per cent. of solids not fat in sample No. 29 is greater than in sample No 20, and the per cent. of fat being one and one-tenth per cent. less than in sample No. 20, while the specific gravity is greater, that there must have been some cream removed from the milk of sample No. 29, yet they were paying 70 cents per hundred for it, the same as they were paying for the milk owned by patron No. 20, when it was actually worth, taking the 70 cents price as a basis, but .6025 cents per hundred to make it into butter. Had the purchasers offered .1772 cents per pound for fat, which they were paying on the average, patron No. 20 would have received .7974 cents per hundred for his milk while patron No. 29 would have received .6025 cents per hundred pounds, unless he had concluded that the cream was worth more to make into butter at the factory than it was to make up at home.

NUMBER OF COWS.	Number of patron.	Que. lactometer corrected.	Per cent. of fat.	Per cent. of solids not fat.	Per cent. of total solids.
17	6	32	4.1	9.17	13.27
7	18	31.4	4.2	9.03	13.23
8	9	31.1	4.2	8.96	13.16
11	27	32.4	4.4	9.33	13.73
14	13	31.4	4	9	13
18	19	31.1	4	9	13
2	28	30.9	4	8.65	12.65
13	4	32	3.9	9.14	13.04
11	10	31.4	3.9	8.98	12.88
8	11	31.4	3.6	8.85	12.45
15	1	31.2	3.7	8.89	12.59
13	30	30.8	4.2	8.88	13.08
9	22	30.4	4	8.73	12.73
20	2	30.6	3.9	8.77	12.67
6	29	32	3.4	9.15	12.55
5	25	30.9	4	8.87	12.87
12	31	30	4	8.74	12.74
16	12	30.1	3.8	8.62	12.42
19	5	31.8	4	9.10	13.10
8	7	31.4	4.3	9.05	13.35
4	26	31.2	4.1	8.97	13.07
15	14	30	4.4	8.70	13.14
27	3	30	4.5	8.72	13.22
7	24	31.9	4	9.13	13.13
12	23	30.4	4	8.74	12.74
17	15	31.2	4.2	8.98	13.19
11	16	31	4	8.90	12.90
20	8	31.8	4	9.10	13.10
7	21	31.2	3.8	8.91	12.71
27	17	30.2	4.3	9.21	13.51
10	20	31.2	4.5	9.04	13.55

September 30th, the last work done by me during the fiscal year ending on that date took place at Jenny Creek Cheese Factory, town of Pitcairn, St. Lawrence county.

This inspection was made by the request of the cheese maker, who had a suspicion that skimming was being carried on by some of his patrons. I found no skimming, but the following report of the test by the lactometer only will convince anyone who the guilty party is at a glance. Patron No. 7 seemed to be the center of attraction, and the little neighborhood situated at the foot of the Adirondack mountains, where clear, cool, pure spring water seemed to be the cheapest commodity at their command, was aroused because one of their "honest" neighbors had been accused of "watering milk." The truth is no one had been so accused, but the details of the process of delivering this duplicate sample to defendant causes the patrons who see it to wonder what is going on, and many will say, "Why, I should *never* have suspected *him*." But regardless of the vaporings of those who chance to be present, the good work goes on just the same, and your inspector passes along to the next place to test the honesty of another neighborhood.

I will give you the details of this case, to show you how much work it is necessary to do if we satisfy all who criticise us that we are honestly and faithfully enforcing the law.

I refer to Label No. 2225, People v. Edwin Lamphear.

Lactometer standing corrected, .94.

Specific gravity, 1.02726.

Fat per cent., 3.5.

$27.26 + 2.45 = 29.71$.

$29.71 \div 3.8 = 7.82$ solids not fat.

$7.82 + 3.50 = 11.32$ total solids.

$11.32 \div 12 = 94.33$ lbs. legal milk in 100 lbs. tested.

$100 - 94.33 = 5.67$ lbs. added H_2O.

$5.67 \times 100 = 567 \div 94.33 = 6$ per cent. of added H_2O.

This analysis I made at the factory with the assistance of Babcock formula. Chemical analysis shows of the same sample of milk the following:

Water, 88.61.

Total solids, 11.39.

Solids not fat, 7.88.

Fat, 3.51.

The analysis by formula in this case was so close to the results of chemical analysis that it should certainly warn anyone who has a desire to adulterate milk to select the days to do so when the inspector is far away. Soon after the case was reported I was called to the office of an attorney who wanted the case investigated further, as he believed his client to be an honest man and something must be wrong about it. He made a request that I go to the farm of defendant and make same test as before and see if the cows did not give the same quality of milk as I found at the factory. This I did, not because I had any doubts about the results, but to place him in a position to at once go to the people's attorney and settle the case without expense to the State, as I was sure that would follow my report of the test at the farm, and I was not mistaken. The results of my inspection at the farm is as follows:

After seeing the cows milked and the milk taken into the house I placed it into a can and thoroughly mixed it. I then took from the can enough milk to fill a glass jar deep enough to float a lactometer. I cooled it to 60 degrees F. and placed the lactometer in it, and it stopped at the 107 point on the graduated tube. The sample at the factory dropped to the 96 mark at a temperature of 60 degrees F. I then added water in the presence of defendant, wife and daughter until the lactometer sank into the milk as far as it did at the factory, September 30th. The daughter allowed that the milk was watered without doubt, but, she *innocently* asked, " Who did it? " I took a sample away for a fat test. After reaching the hotel I made a Babcock test and applied the formula, and found the following results:

Lactometer corrected standing, 107.
Specific gravity, 1.03102.
Fat per cent., 4.7.
$31.02 + 3.29 = 34.31$.
$34.31 \div 3.8 = 9.03$ solids not fat.
$9.03 + 4.7 = 13.73$ total solids.

$13.73 \times 100 = 1373 \div 12 = 114$ showing 100 pounds of defendant's milk unadulterated is equal to 114 of milk required by law while the sample taken from the factory, September 30th, contained but 94.33 of legal milk in 100 pounds. Defendant's attorney very soon made a visit and paid the penalty prescribed by law, and he told me afterward that he thought there was no doubt about the adulteration being correct. This required some work and a little expense, but not nearly as much as would have been required had the case been taken into the court, as it seemed impossible to avoid the first time I called at the office of defendant's attorney.

NUMBER OF PATRON.	Number of cows.	Pounds of milk.	Lactometer.	Thermometer.	Corrected lactometer.
1	12	184	100	72	104
2	7	102	106	69	105
3	12	152	98	70	102
4	12	154	162	69	105
5	15	.....	104	65	106
6	12	136	103	69	106
7	15	157	92	65	94
8	7	69	105	64	106
9	10	67	104	66	105
10	10	.....	106	66	107
11	3	.....	106	68	104
12	9	108	104	62	105
13	10	60	104	60	104

This is the last work done by me during the fiscal year ending on the date of the inspection just reported.

In conclusion permit me to say that from my observation the work of your Department throughout these northern counties has never been so thoroughly done or so much accomplished as there has been during the season just closed. The quality of our dairy products made in our factories is improving rapidly, and I think that I am now justified in saying that the quality of cheese made in St. Lawrence county, for export trade, is as fine as any made in Canada, and are used to fill fancy orders from abroad, which have been in the past filled with Canadian products. It is a great satisfaction to be able to so report, as the dairy industry seems to be the only one that farmers can rely upon, and it behooves us to not only produce a fancy article, but to adopt the most economical methods known to get the largest possible yield from a given quantity of milk.

This, as I stated at the beginning, is my tenth annual report. During that time I have traveled over and given instructions in every dairy county in our State. I have come in contact with all the best makers of butter and cheese and have seen the finest equipped factories and creameries. While I can see a great opportunity for improvement both in the condition of our factories and methods of doing the business, yet, as a whole, taking into consideration the vast amount of dairy products that are being made in the fifth division as compared to other divisions, I believe there is no section of our State that can show a more uniform, fine quality of both butter and cheese than can be shown in this division. Our creameries or butter factories are equipped with all the latest and most improved appliances for making butter, and as a rule the butter makers are competent men. A portion of the creamery butter has for the past two seasons, during the summer months, been packed in 56-pound square boxes for export trade. This trade continued until the price reached 16 cents, after which exporters refused to follow. The balance of the creamery butter made in this division is nearly all marketed in New England. The cheese throughout Jefferson and St. Lawrence counties are nearly all exported via Montreal, and it is safe to say that no American cheese reach the shores of Europe that give better satisfaction than these. The Ogdensburg board of trade pay very high prices from the time the factory season opens until September 1st at least, and I have seen thousands of boxes delivered on Monday each week without a rejection. Our cheese makers, who have to compete with Canadian cheese, have been forced to adopt the best methods known to their business, and by doing this they have made many improvements in the equipment of their factories. In Clinton and Franklin counties very little cheese is made.

The butter from these counties has an excellent reputation and is the main source of income to the farmers, since the price of hops has failed to pay any profit.

The farmers' institutes are growing in favor and have been the means of building quite a number of silos, and the instruction given by the institute force has made it easy as compared to the old method, in securing a corn crop, without which dairying seems to be unprofitable. As the silo seems to have passed the experimental stage, and the price of the improved appliances for the cultivation of the corn crop is within the reach of all farmers, I hear less each year of the short crop of fodder, and the cows are in better condition to do business in the spring than they were before the silo system of preserving food in its succulent state was adopted.

Thanking you for your many courtesies and the assistance you have given me, I beg to submit the foregoing report.

Respectfully,

W. W. HALL.

In conclusion, I desire to express my obligations to the instructors and agents of this division for their uniform courtesy to and co-operation with me in prosecuting the Department work. This work has covered all parts of this division, and has at times made unusual demands upon the time and strength of the men. I commend them for the cheerfulness, energy and ability with which they have met these demands.

All of which is respectfully submitted.

S. BROWN RICHARDSON,

Assistant Commissioner.

REPORT OF C. R. PAYNE.

Hon. Charles A. Wieting, *Commissioner of Agriculture:*

Dear Sir.—As Assistant Commissioner of Agriculture I have the honor of submitting to you my second annual report of the sixth division of the Agricultural Department of the State.

The sixth division, on account of its large manufacturing and shipping interests, is one of the most important in the State. Five great shipping railroads cross its territory and daily furnish New York city with one-half of its milk supply. Of this milk, over eight thousand cans per day are drawn from the sixth division. Outside of these shipping lines there is hardly a village or a hamlet but has its butter or cheese factory. Therefore, the necessity of a thorough milk inspection becomes of the greatest importance. Such an inspection I have endeavored to maintain to the best of my ability, and so successfully that I am satisfied that at the present time the adulteration of milk is steadily decreasing in this division. Not only this, but I find an increasing friendliness and welcome extended to the State agents. They are not, as formerly, looked upon as spies, but as honorable gentlemen faithfully performing their appointed work, and I believe that it is not extravagant to assert that nine-tenths of the dairymen of this division are in hearty sympathy with every effort of the Department in its crusade for pure and healthy milk.

In connection with this I may be allowed to say, that believing that the purity of milk depends upon its cleanliness, I have advised the thorough inspection of factories and stables, which has always resulted in a great improvement in the quality of the milk. It is on these lines that I believe the battle must be fought—clean men—clean cows—and clean stables—give clean and wholesome milk. This means better products and better prices.

VINEGAR.

From the reported inspections I am led to believe that there is little, if any, adulterated vinegar manufactured or sold in this division.

OLEOMARGARINE.

By the kindness of Assistant Commissioner Kracke, two gentlemen connected with his division as oleomargarine experts were detailed to assist in the inspection in this division. The cities of Syracuse and Binghamton were inspected and nothing found. I think, at the present time, that the division is comparatively clear of oleomargarine. It is my intention in the near future to thoroughly investigate this important branch of the Department's work.

The census of butter and cheese factories and shipping stations, which was taken, as directed by you, in the early part of the year, has aided me greatly in my work. At this point I would call your attention to the fact: The conditions controlling a large quantity of the milk in this division are peculiar. Along the shipping lines, the fluctuations in the price of milk have much to do with the butter and cheese factories. When the price of milk is high, the factories lying within a radius of five or six miles are almost all closed. On the other hand, when the price is low at the shipping stations, the factories will open. This accounts, in many cases, for reports that factories are closed.

REPORT OF C. F. NASH.

Number of days inspecting milk	185
Number of days inspecting stables	30
Number of days on special duty, weekly reports, etc	25
Number of days taking census	34
Number of days inspecting vinegar	20
Number of days inspecting oleomargarine	15
Total number of days	309

Number of creameries inspected as to condition........	70
Number of butter creameries inspected as to condition..	40
Number of cheese factories inspected as to condition..	68
Total number of cheese factories and creameries..	178

Number of milk peddlers inspected..................	500
Number of creamerymen's milk inspected on delivery at boat and railroad depots.........................	80
Number of dairymen's milk inspected on delivery at boat and railroad depots............................	3,500
Number of dairymen's milk inspected on delivery at butter creameries	2,000
Number of dairymen's milk inspected on delivery at cheese factories	4,000
Number of cans of creamerymen's milk inspected on delivery at boat and railroad stations...............	3,000
Number of cans of dairymen's milk inspected on delivery at boat and railroad depots.................	8,000
Number of cans of dairymen's milk inspected at butter creameries	2,000
Number of cans of dairymen's milk inspected on delivery at cheese factories.............................	5,400
Number of cans of peddlers' milk inspected...........	1,800
Total number of cans of milk inspected...........	20,200

Total number of samples delivered to chemist.........	49
Estimated number of miles travelled..................	8,500

REPORT OF JAMES BOICE.

Number of days in court............................	1
Number of days inspecting milk, vinegar and butter...	47
Number of days obtaining evidence and delivering samples	3
Number of days of special duty making census of factories	14
Total number of days..........................	65

Number of creameries inspected as to condition	41
Number of butter creameries and shipping creameries	41
Number of cheese factories	2
Number of milk peddlers inspected	185
Number of stores inspected as to milk, vinegar and oleomargarine	7
Number of cans of creamerymen's milk inspected on delivery at railroad depots	24
Number of dairymen's milk inspected at creameries	599
Number of dairymen's milk inspected at butter creameries	422
Number of dairymen's milk inspected at cheese factories	102
Number of cans of creamerymen's milk inspected at railroad depots	324
Number of cans of dairymen's milk inspected at creameries	1,417
Number of cans of dairymen's milk inspected at butter creameries	736
Number of cans of peddlers' milk inspected	709
Number of stores inspected as to milk	18
Number of cans dairymen's milk inspected at cheese factories	226
Total number of cans of milk inspected	3,430
Number of samples delivered to chemist	4
Number of appearances in cases	1
Estimated number of miles traveled	1,450

REPORT OF A. J. McSWEENY, FROM OCTOBER 1, 1896, TO DECEMBER 20, 1896.

Number of days inspecting milk	41
Number of days conferring with Assistant Commissioner Payne	5
Number of days on factory reports	5
Total number of days	52

Number of creameries inspected as to condition	26
Number of cheese factories inspected as to condition	26
Number of milk peddlers inspected	163
Number of creamerymen's milk inspected	19
Number of dairymen's milk inspected	709
Number of cans of creamerymen's milk inspected	244
Number of cans of dairymen's milk inspected	1,448
Number of cans of peddlers' milk inspected	644
Total number of cans of milk inspected	2,336
Number of samples delivered to chemist	1

REPORT OF CHAS. T. RUSSELL, FROM AUGUST 1, 1897, TO SEPTEMBER 30, 1897.

Number of days inspecting milk	42
Number of special days of duty, reports, etc	10
Total number of days	52

Number of peddlers inspected	142
Number of railroad milk shipping stations inspected	41
Number of cheese factories inspected as to condition	13
Number of butter factories inspected as to condition	6
Number of stores inspected	1
Number of dairymen's milk inspected on delivery at railroad milk shipping stations	1,081
Number of dairymen's milk inspected on delivery at cheese factories	446
Number of dairymen's milk inspected on delivery at butter factories	178
Number of cans of dairymen's milk inspected on delivery at railroad milk shipping stations	1,890
Number of cans of dairymen's milk inspected on delivery at cheese factories	903
Number of cans of dairymen's milk inspected on delivery at butter factories	517

Number of cans of peddlers' milk inspected	528
Number of cans of milk inspected at stores	10
Total number of cans inspected	3,848
Number of samples delivered to chemist	15
Number of samples taken by myself and A. M. Kibbe, and delivered to chemist	9
Total number of samples taken	24
Estimated number of miles traveled	1,513

REPORT OF A. M. KIBBE, FROM JULY 1, 1897, TO SEPTEMBER 30, 1897.

Number of days inspecting milk	38
Number of creameries inspected as to condition	6
Number of cheese factories inspected as to condition	10
Number of milk stations inspected as to condition	20
Number of milk peddlers inspected	120
Number of dairymen's milk inspected on delivery at cheese factories	301
Number of dairymen's milk inspected on delivery at creameries	127
Number of cans of dairymen's milk inspected on delivery at cheese factories	571
Number of cans of dairymen's milk inspected on delivery at creameries	320
Number of dairymen's milk inspected on delivery at milk stations	585
Number of cans of dairymen's milk inspected on delivery at milk stations	998
Number of dairies inspected	1,133
Number of cans of milk inspected	2,240
Estimated number of miles traveled	1,095
Number of samples taken	7
Number of samples taken by myself and C. T. Russell	9

PROSECUTIONS.

The following is a report of actions settled and pending for violation of the Agricultural Law in the Sixth Division of the Agricultural Department of the State:

LABEL No. 4276.

Supreme Court.

Action commenced in the Supreme Court October 6, 1897; defendant appeared before D. L. Atkyns, attorney; case still pending.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, Allen G. Hay.
Chemist: Hugh C. Troy.

LABEL No. 4277.

Case settled September 9, 1897, by the payment by defendants of $100.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, C. R. Payne.
Chemist: Hugh C. Troy.

LABEL No. 4280.

Issued summons and notice in Supreme Court September 8, 1897; was directed by Deputy Attorney-General Parsons not to proceed with the case until further notice from him.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, F. W. Church.
Chemist: Hugh C. Troy.

LABEL No. 4255.

Action commenced in Supreme Court September 27, 1897; defendant appeared by John O'Donnell, attorney, Truxton, N. Y.; action still pending.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, C. R. Payne.
Chemist: Hugh C. Troy.

LABEL No. 4292.

Action commenced in Supreme Court October 18, 1897; case settled November 3, 1897, by the payment by defendant of $50 and costs.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, Geo. Dennis.
Chemist: Hugh C. Troy.

LABEL Nos. 4293, 4294.

Action commenced in Supreme Court October 8, 1897; case settled November 3, 1897, by the payment by defendant of $100 and costs.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, Manager Brown.
Chemist: Hugh C. Troy.

LABEL No. 4282.

Action commenced in the Supreme Court October 9, 1897; case settled October 9, 1897, by payment by defendant of $74 and costs.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, Geo. Dennis.
Chemist: Hugh C. Troy.

LABEL No. 4279.

Action commenced in the Supreme Court November 13, 1897; case still pending.

Attorney: A. O. Briggs.
Witnesses: Chas. F. Nash, Geo. Dennis.
Chemist: Hugh C. Troy.

LABEL No. 2357.

Action was brought in the Supreme Court December 10, 1896; defendant having a large family to support, action was discontinued on payment of costs. Action was renewed under advice of an inspector December 4, 1897, when defendant plead guilty and was fined $25.

Attorney: John E. Smith.
Witnesses: James Boice, F. E. Belden.
Chemist: Geo. W. Cavanaugh.

LABEL No. 2354.

Action taken September 22, 1896; defendant was convicted and fined $25.

Attorney: John E. Smith.
Witness: James Boice.
Chemist: F. E. Englehardt.

LABEL No. 3903.

His attorney, he is irresponsible and innocent of the charge; he was advised by Inspector Boice to appear before a justice and plead guilty; no action brought.

Attorney: John E. Smith.
Witnesses: John Parker, James Boice.
Chemist: George W. Cavanaugh.

LABEL No. 2399.

Defendant is very poor, and there is no doubt of his guilt; his counsel promised to pay costs; a part of which have been paid; no prosecution.

Attorney: John E. Smith.
Witnesses: A. J. McSweeny, William Marble.
Chemist: Geo. W. Cavanaugh.

LABEL No. 2400.

Under advice of Attorney-General Hancock, the defendant paid costs at Syracuse, January 15, 1897; not to prosecute farther.

Attorney: John E. Smith.

Witness: A. J. McSweeny.

Chemist: Wm. Manlius Smith.

LABEL Nos. 3908, 825.

Action brought in Supreme Court, February 3, 1897; answer served March 1, 1897 by D. G. Wellington, Hamilton, N. Y.; noticed for trial at September term, but passed term by consent on account of illness of Attorney Wellington; case pending.

Attorney: John E. Smith.

Witnesses: Charles F. Nash, Charles Tripp.

Chemist: H. E. Nimms.

LABEL No. 822.

Action brought in Supreme Court, February 3, 1897; on February 15, 1897, defendant paid fine of $25 and all costs; case reported to Commissioner and Attorney-General.

Attorney: John E. Smith.

Witnesses: Charles F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 865.

Action commenced in Supreme Court on February 11, 1897; February 23, 1897, defendant paid $100 including fine and costs.

Attorney: John E. Smith.

Witnesses: Charles F. Nash, Fred Wilcox.

Chemist: J. F. McGregory.

LABEL Nos. 3905, 8271.

Action brought in Supreme Court, January 28, 1897; answer received February 14, 1897; fined $25 and costs; settled by note; when the same is paid, case will be considered settled.

Attorney: John E. Smith.

Witnesses: Charles F. Nash, Norva Snow.

Chemist: H. E. Nimms.

LABEL Nos. 245, 847.

Action brought in Supreme Court, January 28, 1897; answer received February 14, 1897; fined $25 and cost of suit, September 13, 1897.

Attorney: John E. Smith.

Witnesses: Charles F. Nash, Norva Snow.

Chemist: H. E. Nimms.

LABEL No. 4265.

Warant issued February 2, 1897; defendant arraigned and plead guilty and paid fine of $25 and costs.

Attorney: John E. Smith.

Witnesses: Charles F. Nash, C. R. Payne.

Chemist: F. E. Englehard.

LABEL No. 4263.

Warrant issued February 2, 1897; arraigned and plead guilty; fined $25 and costs.

Attorney: John E. Smith.

Witnesses: Charles F. Nash, C. R. Payne.

Chemist: F. E. Englehard.

LABEL No. 4259.

Action brought in Supreme Court June 1, 1897; defendant paid fine of $100, covering penalty and costs.

Attorney: John E. Smith.
Witnesses: Chas. F. Nash, C. R. Payne.
Chemist: H. E. Nims.

LABEL No. 4266.

Action brought in Supreme Court June 3, 1897; June 17, 1897, received notice of retainer; July 30, 1897, defendant paid fine of $25 and costs.

Attorney: John E. Smith.
Witnesses: Chas. F. Nash, C. R. Payne.
Chemist: H. E. Nims.

LABEL Nos. 4270, 4271, 4272, 4273, 4269.

About May 28, 1897, defendant compromised by paying a fine of $200.

Attorney: John E. Smith.
Witnesses: Chas. F. Nash, C. R. Payne.
Chemist: J. F. McGregory.

LABEL Nos. 4264, 4274.

Action brought August 3, 1897; answer not received September 14, 1897; case pending.

Attorney: John E. Smith.
Witnesses: Chas. F. Nash, Chas. O. York.
Chemist: J. F. McGregory.

LABEL No. 4258.

Action brought in Supreme Court September, 1897; on October 9, 1897, judgment entered with clerk of Madison county in favor of plaintiff for $100 and $28.67 costs.

Attorney: John E. Smith.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4313.

Action commenced in Supreme Court on September 14, 1897; November 12, 1897, defendant paid fine of $25 and part of costs.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, C. T. Russell.

Chemist: Hugh C. Troy.

LABEL No. 4301.

Action brought in Supreme Court September 25, 1897; defendant had a good defense and was irresponsible; case settled by defendant paying costs.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, C. T. Russell.

Chemist: Hugh C. Troy.

LABEL No. 4314.

Action commenced in Supreme Court on September 24, 1897; defendant paid $25 fine and costs.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, C. T. Russell.

Chemist: Hugh C. Troy.

LABEL No. 4312.

Action commenced in Supreme Court September 24, 1897; defendant paid $25 fine and costs.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, C. T. Russell.

Chemist: Hugh C. Troy.

LABEL No. 4278.

Action commenced in Supreme Court on September 22, 1897; October 11, 1897, defendant paid $25 fine and costs.

Attorney: John E. Smith.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4317.

Action brought October 15, 1897. December 1, 1897, defendant paid $25 fine and costs.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, C. T. Russell.

Chemist: Hugh C. Troy.

LABEL No. 4315.

Action brought in Supreme Court October 15, 1897. November 5, 1897, defendant paid $25 fine and part of costs.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, M. M. Miller.

Chemist: Hugh C. Troy.

LABEL No. 4311.

Action brought in Supreme Court October 15, 1897. November 8, 1897, defendant paid $25 fine and costs.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, C. T. Russell.

Chemist: Hugh C. Troy.

LABEL No. 4316.

Action commenced in Supreme Court October 1, 1897. Defendant had a perfect defense. November 19, 1897, paid costs. Action discontinued.

Attorney: John E. Smith.

Witnesses: A. M. Kibbe, C. T. Russell.

Chemist: Hugh C. Troy.

LABEL No. 4308.

Action commenced in Supreme Court October 13, 1897. Action pending.

Attorney: John E. Smith.

Witnesses: C. T. Russell, Robert J. Warcup.

Chemist: Hugh C. Troy.

LABEL Nos. 3906, 3926.

Action commenced October 21, 1896, in Court of Special Sessions. Defendant appeared before Justice M. C. Wood and paid $100 fine.

Witnesses: Milton Morgan, James Boice, C. F. Nash.

Chemist: Geo. W. Cavanaugh.

LABEL No. 3904.

Defendant appeared before Justice Briggs October 23, 1896; pleaded guilty, and paid fine of $25.

Witness: Chas. F. Nash.

Chemist: H. E. Nims.

LABEL No. 861.

Defendant appeared before Justice Bergen, October 21, 1896; pleaded guilty and paid fine of $25.

Witness: Chas. F. Nash.

Chemist: J. F. McGregory.

LABEL No. 3916.

Defendant appeared before Justice W. E. Roberts; pleaded guilty, and paid fine of $100.

Witnesses: M. T. Morgan, A. J. McSweeney.

LABEL No. 4254.

Defendant appeared before Wood and Horton, August 7, 1897, and paid fine of $50.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: H. E. Nims.

LABEL No. 3930.

Defendant appeared before John Delaney, and paid fine of $25.

Attorney: John Delaney.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Wm. Manlius Smith.

LABEL No. 4260.

Defendant appeared before John Delaney, and paid fine of $25.

Attorney: John Delaney.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Wm. Manlius Smith.

LABEL No. 4275.

Defendant appeared before John Delaney, and paid fine of $40.

Attorney: John Delaney.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4284.

Defendant appeared before John Delaney, and paid fine of $40.

Attorney: John Delaney.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4299.

Case referred to J. P. Allds, September 27, 1897, and pending settlement.

Attorney: J. P. Allds.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4296.

Case referred to J. P. Allds, September 27, 1897, and pending settlement.

Attorney: J. P. Allds.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4297.

Case referred to J. P. Allds, September 27, 1897, and pending settlement.

Attorney: J. P. Allds.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4295.

Case referred to J. P. Allds, September 27, 1897, and pending settlement.

Attorney: J. P. Allds.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4298.

Case referred to J. P. Allds, September 27, 1897, and pending settlement.

Attorney: J. P. Allds.

Witnesses: Chas. F. Nash, C. R. Payne.

Chemist: Hugh C. Troy.

LABEL No. 4290.

Case referred to J. P. Allds, September 27, 1897, and pending settlement.

Attorney: J. P. Allds.

Witnesses: Chas. F. Nash, Fred M. Dewey.

Chemist: Hugh C. Troy.

LABEL No. 4336.

Case referred to Abram Crosby, October 20, 1897, and pending settlement.

Attorney: Abram Crosby.

Witnesses: Chas. F. Nash, R. O. Tupper.

Chemist: Hugh C. Troy.

LABEL No. 4339.

Case referred to Abram Crosby, October 20, 1897, and pending settlement.

Attorney: Abram Crosby.

Witnesses: Chas. F. Nash, Geo. W. Prince.

Chemist: Hugh C. Troy.

LABEL No. 4309.

Case referred to E. E. Mellen, October 20, 1897, and pending settlement.

Witnesses: Chas. T. Russell, Samuel Stevens.

Chemist: Hugh C. Troy.

LABEL No. 4344.

Case referred to E. E. Mellen, October 20, 1897, and pending settlement.

Attorney: E. E. Mellen.

Witnesses: Chas. T. Russell, Samuel Stevens.

Chemist: Hugh C. Troy.

LABEL No. 4341.

Case referred to E. E. Mellen, October 20, 1897, and pending settlement.

Attorney: E. E. Mellen.

Witnesses: Chas. T. Russell, Lewis A. Hollenbeck.

Chemist: Hugh C. Troy.

LABEL No. 4348.

Case referred to E. E. Mellen, October 20, 1897, and pending settlement.

Attorney: E. E. Mellen.

Witnesses: Chas. T. Russell, Lewis Hollenbeck.

Chemist: Hugh C. Troy.

LABEL No. 4350.

Case referred to E. E. Mellen, October 20, 1897, and pending settlement.

Attorney: E. E. Mellen.

Witnesses: Chas. T. Russell, Lewis Hollenbeck.

Chemist: Hugh C. Troy.

LABEL No. 4318.

Case referred to Abram Crosby, October 20, 1897, and pending settlement.

Attorney: Abram Crosby.

Witnesses: A. M. Kibbe, Wm. E. Greenman.

Chemist: Hugh C. Troy.

LABEL No. 4340.

Case referred to J. P. Allds, December 3, 1897, and pending settlement.

Attorney: J. P. Allds.

Witnesses: Chas. F. Nash, Henry A. Sweet.

Chemist: Hugh C. Troy.

LABEL No. 4319.

Case referred to Commissioner Wieting, Albany.
Witnesses: A. M. Kibbe, D. Ver Stoddard.
Chemist: Hugh C. Troy.
Attorney not designated.

LABEL No. 4335.

Case referred to Commissioner Wieting, Albany.
Witnesses: Chas. T. Russell, Samuel D. Burdick.
Chemist: Hugh C. Troy.
Attorney not yet designated.

In conclusion, allow me to extend my thanks to the agents, chemists and counsel employed in this division, who have sustained and assisted me to the fullest extent of their abilities in the work of the division.

Respectfully submitted,

CHARLES R. PAYNE,

Assistant Commissioner.

REPORT OF VERLETT C. BEEBE.

Hon. Charles A. Wieting, *Commissioner of Agriculture:*

Dear Sir.—As Assistant Commissioner of Agriculture for the Seventh Division of the Department of Agriculture of this State, I submit the following as a brief summary and report of the work done therein by me in my province as such assistant, for the year ending September 30, 1897.

Receiving my appointment to such position in July, 1896, and entering upon this work shortly thereafter, I had but too little become conversant with the full requirements of the position at the date at which this report begins, but I feel that during the present year I have been able to accomplish much and to better prosecute the work. It needs not to be said that the work necessary to be done in this division, which comprises six counties, exceeded in fertility by few in this State and in which the products of the dairy is the article upon which a very large number of its inhabitants depend for their sustenance, is scarcely liable to be over-estimated, and the importance of this work must increase in the years to come for the cheese, butter and milk industry is far from on the wane, but rather is on the increase.

It has not been possible for me during the year to personally visit the large number of factories in which cheese is manufactured and the creameries in the division, and to investigate every source of opportunity to violate the agricultural law, but it has been my aim to do this personally so far as time would allow and to keep in touch with the doings in all parts of the division as best I was able. A survey of the work of the year discloses the fact that our labor has not been wholly misspent and must lead us to hope that the results will be of more permanent benefit. We may judge the future by the past to some extent and if the results of the work of the present year are any criterion we shall expect to find fewer violations of the Agricultural Law hereafter in the localities in which our investigations have been made than in the past. In places where investigations and complaints have been made the previous year, few violations are to be reported as a rule, and this notwithstanding the fact that proper watch in those places was kept. There a general observance and seeming understanding of the intent, meaning and purposes of the Agricultural Law is manifest. On the other hand in districts where new factories have been established or where inspections under this Department have not been made in recent years, if ever, have a great majority of the complaints of the present year been occasioned.

As an illustration I may cite the city of Elmira. During the few months of my service in this Department last year, I spent considerable time at work in and about that city, and during that time three complaints of violations of the law relative to adulterations of milk were made and prosecuted. During the present year no complaints of violations of the law as to milk adulterations have been made. We may refer to two other places, in one of which a new factory was established during this year, and in another in which no investigation had been made under this Department in many years as I have been creditably informed. During the spring of the present year a factory was started at Beaver Dam, in the county of Schuyler, and during the month of August an inspection made there resulted in the bringing of six complaints for adulterations. At Young Hickory, in Steuben county, there is located a cheese factory which it is said had not been visited by an official of this Department for some considerable time previous to the present year, and in the month of September last three samples, upon which complaints were subsequently made, were taken.

From October 1, 1896 to February 12, 1897, I had the assistance of two agents and since the latter date, I have had one. I deemed it advisable to personally assist the agents in their investigations, procuring of samples and making tests. In all we have submitted to the chemist for analysis, forty-nine samples of milk and twenty-three samples of vinegar. Thirty complaints were made for adulteration of milk and twenty-two complaints made for adulteration of vinegar. It has seemed wise to me to have all complaints disposed of as soon as could well be without hurrying them to the detriment of the prosecution, and of the thirty complaints made of the adulteration of the milk, fourteen were finally disposed of during the year and sixteen are still pending, but the latter will shortly be brought to some disposition, I believe. Of the fourteen cases already disposed of, thirteen were settled by either the persons against whom the complaints were made paying penalties without an action being brought therefor or by penalty being paid by them after action brought. In only one of these cases was the defendant successful in receiving a verdict of no cause of action after trial.

While in this division there are several cities of considerable proportion and in which large quantities of milk are sold by peddlers about the streets we have found little adulterated milk offered for sale by them. Most of these complaints have been made upon milk sent to cheese factories or creameries.

A large quantity of milk is annually shipped from the counties in this division to the cities of New York, Buffalo and Rochester, and very few adulterations have been found in such shipments.

Considerable attention has been given in investigations as to adulterations in vinegar. As a result we have to report the number of complaints as above stated. Of this number eleven have been finally disposed of and in each of these eleven cases the person complained of has paid a penalty for his infringement of the law. Nine complaints were made on samples of vinegar taken in the city of Elmira and eight of these were vinegar received from St. Louis. The other complaints arose from various points in the division. I can say that there is apparent a general tendency to much care in the purchase of vinegar, and a quite general requirement on the part of the dealer that the manufacturer guarantee that the vinegar is pure cider vinegar. The three vinegar manufactories in this division seem to be putting a pure article on the market.

We have been unable to find any oleomargarine, and do not believe that any is being offered for sale in this division.

I have frequently been called to investigate reported disease among cattle. But in only one instance have I found the situation such that I deemed it necessary to bring the matter to the attention of this department. September 22d, last, report was made to me that some disease was apparent in the herd of cattle on the Burnham farm, situated near the city of Elmira. I promptly investigated and found cause for much alarm. I found several cows apparently diseased and at once called the attention of the Department to the same. The cattle were tested by Dr. Moore, of Geneva, and he prouounced the disease anthrax. Seven head of these cattle died but the spread of the disease was further stopped. The same disease broke out in the herd of cattle on the farm last year. I immediately forbid owner from selling milk from this dairy. I have had occasion to visit and inspect and have caused to be visited and inspected many herds of cattle throughout this division and I think that the general condition of the cattle may be said to be good and they seem generally to be having proper care. I have inspected many stables and in only a few has reason been found for serious criticism. Our instructions to owners and those in charge of stables where some corrections seemed needed were faithfully acted upon.

A report of the agents employed in this division is found in the following.

Report of Charles J. Morgenstern, agent, for the year ending October 1, 1897, is as follows:

Number of days inspecting milk	131
Number of days inspecting butter	23
Number of days inspecting vinegar	23
Number of days inspecting herds of cattle	2
Number of days attending court	12
Number of days obtaining evidence	6
Number of days making out complaints	7
Number of days at special work	16
Total number days	220

Number of cheese factories inspected	39
Number of creameries inspected	25
Number of butter creameries inspected	31
Number of condenseries inspected	5
Number of vinegar manufactories inspected	2
Number of stables inspected	6

Number of cans of milk inspected delivered at creameries	311
Number of cans of milk inspected delivered at cheese factories	1,050
Number of cans of milk inspected delivered at butter creameries	1,082
Number of cans of milk inspected delivered at condenseries	271
Number of cans of milk inspected delivered at railroad stations	1,971
Number of cans of milk inspected from milk peddlers	1,344
Total	6,029

Number of barrels of vinegar inspected	207
Number of samples of milk delivered to chemist	48
Number of milk complaints made	30
Number of samples of vinegar delivered to chemist	23
Number of vinegar complaints made	22

Report of Grove Barnum, agent, for period from October 1, 1896, to February 12, 1897, is as follows:

Number of days inspecting milk	30
Number of days inspecting vinegar	14
Number of days attending court	4
Number of days making out complaints	1
Number of days at special work	11
Total number days	60

Number of cheese factories inspected	9
Number of creameries inspected	2
Number of butter creameries inspected	4

Number of cans of milk inspected delivered to butter creameries	101
Number of cans of milk inspected delivered to cheese factories	177
Number of cans of milk inspected delivered to railroad stations	266
Number of cans of milk inspected from milk peddlers	206
Total number of cans inspected	750

Number of samples of milk delivered to chemist	1

Prosecutions.

The following summary statements show the prosecutions in the Seventh Division during the year ending September 30, 1897:

CASE No. 1580.

Sample taken by Grove Barnum, agent, on the 2d day of July, 1895, and analysis made by John A. Miller, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Wyoming county.

Action now pending.

William Russell, attorney for plaintiff.

CASE No. 1587.

Sample taken by C. J. Morgenstern, agent, on the 4th day of February, 1896, and analysis made by John A. Miller, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Wyoming county.

Action tried December 12, 1896, and resulted in a verdict no cause of action.

Eugene M. Bartlett, attorney for plaintiff.

CASE No. 1597.

Sample taken by C. J. Morgenstern on the 19th day of June, 1896, and analysis made by John A. Miller, chemist, of Buffalo, N. Y. Action begun in Supreme Court, Livingston county.

Action settled November 6, 1896, upon payment by the defendant of penalty of $100 and $42 costs.

Stone & Norton, attorneys for the plaintiff.

CASE No. 1596.

Sample taken by C. J. Morgenstern, agent, the 19th day of June, 1896. Analyzed by John A. Miller, chemist, of Buffalo, N. Y. Action begun by the service of summons and complaint in the Supreme Court of Livingston county and answered by defendant.

Action tried February 5, 1896, and resulted in a verdict for the plaintiff of $100; costs taxed at $96.68. Judgment entered for $196.68 and the same was paid.

Stone & Norton, of Attica, N. Y., attorneys for plaintiff.

CASE No. 1592.

Samples taken by Grove Barnum, agent, the 10th day of January, 1896, and analyzed by John A. Miller, chemist, of Buffalo, N. Y.

Action begun by service of summons and complaint in the Supreme Court of Chemung county.

Action settled January 19, 1897, by defendant paying penalty of $100.

A. E. Baxter, attorney for plaintiff.

CASE No. 1607.

Sample taken by C. J. Morgenstern, agent, the 20th day of July, 1896, and analysis made by John A. Miller, chemist, of

Buffalo, N. Y. Action begun by service of summons of complaint in Supreme Court, Livingston county.

Action settled May 7, 1897, by defendant's paying penalty of $100.

A. E. Baxter, attorney for plaintiff.

CASE No. 1609.

Sample taken by C. J. Morgenstern, agent, the 3d day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Livingston county.

Action settled by defendant's paying penalty of $100.

Charles D. Newton, attorney for the plaintiff.

CASE No. 3460.

Sample taken by C. J. Morgenstern, agent, the 3d day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Livingston county.

Action came on for trial February 5, 1897, and on motion of defendant, plaintiff's complaint was dismissed upon the ground that the same did not state facts sufficient to constitute a cause of action in that it did not state whether or not milk was taken to a skim milk factory or a full cream factory.

An appeal was taken by plaintiff and the same is now pending.

Charles D. Newton, attorney for the plaintiff.

CASE No. 3463.

Sample taken by C. J. Morgenstern, agent, the 21st day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Chemung county.

Action came on for trial June 12, 1897, and by consent judgment directed for plaintiff for penalty of $100.

A. E. Baxter, attorney for plaintiff.

CASE No. 3475.

Sample taken by C. J. Morgenstern, agent, the 19th day of February, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Steuben county.

Action settled by defendant's paying penalty of $100, June 10, 1897.

A. E. Baxter, attorney for plaintiff.

CASE No. 3479.

Sample taken by C. J. Morgenstern, agent, the 13th day of April, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in Supreme Court, Genesee county.

Action now pending.

E. P. Coyne, attorney for plaintiff.

CASE No. 3484.

Sample taken by C. J. Morgenstern, agent, the 13th day of April, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in Supreme Court, Genesee county.

Action settled by defendant's paying $100 penalty.

E. P. Coyne, attorney for plaintiff.

CASE No. 3427.

Sample taken by C. J. Morgenstern, agent, the 3d day of June, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in Supreme Court, Genesee County.

Action settled by defendant's paying penalty of $50.

A. C. McCall, attorney for plaintiff.

CASE No. 3430.

Sample taken by C. J. Morgenstern, agent, the 3d day of June, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in Supreme Court, Livingston county.

Action discontinued on advice of Attorney-General.

A. C. McCall, attorney for plaintiff.

CASE No. 1614.

THE PEOPLE *v.* LEWIS PETERSON.

Sample taken by Grove Barnum, agent, July 20, 1896, and analysis made by John A. Miller, chemist, of Buffalo, N. Y. Action begun in Supreme Court, Chemung county.

Action settled by defendant's paying penalty of $100.

A. E. Baxter, attorney for plaintiff.

CASE No. 3403.

Sample taken by Grove Barnum, agent, the 8th day of August, 1896, and analysis made by John A. Miller, chemist, of Buffalo, N. Y. Action begun in Supreme Court, Wyoming county.

Action tried May 7, 1897, and resulted in a verdict no cause of action.

Stone & Norton, attorneys for plaintiff.

CASE No. 3453.

Sample taken by C. J. Morgenstern, agent, the 8th day of September, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Wyoming county.

Action settled November, 1896, by defendant's paying penalty of $85.

G. S. Van Gorder, attorney for plaintiff.

CASE No. 1612.

Sample taken by C. J. Morgenstern, agent, the 18th day of September, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in Supreme Court, Genesee county.

Action now pending.

James Le Seur, attorney for plaintiff.

CASE No. 3418.

THE PEOPLE *v.* HERMAN REINHOLTZ.

Sample taken by C. J. Morgenstern, agent, the 17th day of July, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in Supreme Court, Genesee county.

Action now pending.

A. C. McCall, attorney for plaintiff.

CASE No. 3442.

THE PEOPLE *v.* DENNIS HANRAHAN.

Sample taken by C. J. Morgenstern, agent, the 31st day of July, 1897, and analysis made by Hugh C. Troy, of Ithaca, N. Y. Action begun in Supreme Court Steuben county.

Action settled by defendant's paying penalty of $100.

Milo Acker attorney for plaintiff.

CASE No. 3440.

Sample taken by C. J. Morgenstern, agent, the 1st day of August, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in Supreme Court, Steuben county.

Action settled by defendant's paying penalty of $100, October 16, 1897.

Milo Acker, attorney for plaintiff.

CASE No. 3444.

Sample taken by C. J. Morgenstern, agent, the 1st day of August, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y.

Settlement made by defendant's paying penalty of $100.

Milo Acker, attorney for plaintiff.

CASE No. 3449.

Sample taken by C. J. Morgenstern, agent, the 3d day of August, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in Supreme Court.

Action now pending.

A. C. McCall, attorney for plaintiff.

CASE No. 3450.

Sample taken by C. J. Morgenstern, agent, the 10th day of August, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Schuyler county.

Action now pending.

A. E. Baxter, attorney for plaintiff.

CASE No. 3448.

Sample taken by C. J. Morgenstern, agent, the 10th day of August, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Schuyler county.

Action now pending.

A. E. Baxter, attorney for plaintiff.

CASE No. 3445.

Sample taken by C. J. Morgenstern, agent, the 10th day of August, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Schuyler county.

Action now pending.

A. E. Baxter, attorney for plaintiff.

CASE No. 3494.

Sample taken by C. J. Morgenstern, agent, the 10th day of August, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Schuyler county.

Action now pending.

A. E. Baxter, attorney for plaintiff.

CASE No. 3496.

Sample taken by C. J. Morgenstern, agent, the 10th day of August, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Schuyler county.

Action now pending.

A. E. Baxter, attorney for plaintiff.

CASE No. 3443.

Sample taken by C. J. Morgenstern, agent, the 10th day of August, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Schuyler county.

Action now pending.

A. E. Baxter, attorney for plaintiff.

CASE No. 4708.

Sample taken by C. J. Morgenstern, agent, the 1st day of September, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Steuben county.

Action now pending.

Milo Acker, attorney for the plaintiff.

CASE No. 4712.

Sample taken by C. J. Morgenstern, agent, the 14th day of September, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Steuben county.

Action now pending.

Milo Acker, attorney for plaintiff.

CASE No. 4711.

Sample taken by C. J. Morgenstern, agent, the 14th day of September, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Steuben county.

Action now pending.

Milo Acker, attorney for the plaintiff.

CASE No. 4710.

Sample taken by C. J. Morgenstern, agent, the 23d day of September, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Steuben county.

Action settled by defendant's paying penalty of $100.

Milo Acker, attorney for the plaintiff.

CASE No. 4772.

Sample taken by C. J. Morgenstern, agent, the 28th day of September, 1897, and analysis made by Hugh C. Troy, chemist, of Ithaca, N. Y. Action begun in the Supreme Court, Steuben county.

Action now pending.

Milo Acker, attorney for the plaintiff.

VINEGAR.

The following summary statement shows the prosecutions commenced in the Seventh Division during the year ending October 1, 1897, for violation of the Agricultural Law relating to the sale of vinegar:

CASE No. 1218.

Sample taken by C. J. Morgenstern, agent, October 20, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Chemung county.

Action settled by the defendant's paying penalty of $100, April 6, 1897.

A. E. Baxter, attorney for plaintiff.

CASE No. 1222.

Sample taken by C. J. Morgenstern, agent, the 27th day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action settled by defendant's paying penalty of $100 and $25 costs.

Milo Acker attorney for plaintiff.

CASE No. 1229.

Sample taken by C. J. Morgenstern, agent, the 3d day of December, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Wyoming county.

Action settled by defendant's paying penalty of $25 and $5 costs.

James Le Seur, attorney for the plaintiff.

CASE No. 1231.

Sample taken by C. J. Morgenstern, agent, on the 16th day of December, 1896, and sample analyzed by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Genesee county.

Action settled by the defendant's paying penalty of $25 and $5 costs.

James Le Seur, attorney for the plaintiff.

CASE No. 1224.

Sample taken by C. J. Morgenstern, agent, the 16th day of December, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Genesee county.

Settlement made by defendant's paying penalty of $25 and $5 costs.

James Le Seur, attorney for the plaintiff.

CASE No. 1247.

Sample taken by C. J. Morgenstern, agent, the 14th day of January, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Wyoming county.

Action settled upon payment by J. L. Kimberly, manufacturer of the vinegar, of the sum of $100 penalty and $29.35 costs.

A. C. McCall, attorney for the plaintiff.

CASE No. 1240.

Sample taken by C. J. Morgenstern, agent, on the 13th day of January, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Settlement made upon payment by defendant of penalty of $100.

A. C. McCall, attorney for the plaintiff.

CASE No. 1248.

Sample taken by C. J. Morgenstern, agent, on the 14th day of January, 1897, and analysis made by F. P. Vandenbergh. Settlement made upon payment by defendant of penalty of $100.

A. C. McCall, attorney for the plaintiff.

CASE No. 1243.

Sample taken by C. J. Morgenstern, agent, the 27th day of January, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Summons and complaint issued, but service not made on defendant, he having removed from this State.

William Armstrong, attorney for the plaintiff.

CASE No. 1242.

Sample taken by C. J. Morgenstern, agent, the 27th day of January, 1897, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Action begun in the Supreme Court, Livingston county.

Judgment taken by default for $127.77. Judgment paid.

W. W. Armstrong, attorney for the plaintiff.

CASE No. 1215.

Sample taken by C. J. Morgenstern, agent, the 22d day of September, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Case pending.

CASE No. 1270.

Sample taken by C. J. Morgenstern, agent, the 20th day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Case pending.

CASE No. 1216.

Sample taken by C. J. Morgenstern, agent, the 20th day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Case pending.

CASE No. 1220.

Sample taken by C. J. Morgenstern, agent, the 20th day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Case pending.

CASE No. 1221.

Sample taken by C. J. Morgenstern, agent, the 20th day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Case pending.

CASE No. 1230.

Sample taken by C. J. Morgenstern, agent, the 26th day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Case pending.

CASE No. 1227.

Sample taken by C. J. Morgenstern, agent, the 26th day of October, and analysis made by F. P. Vandenbergh, chemist of Buffalo, N. Y. Case pending.

CASE No. 1228.

THE PEOPLE *v.* CHARLES KLINE.

Sample taken by C. J. Morgenstern, agent, the 26th day of October, 1896, and analysis made by F. P. Vandenbergh, chemist, of Buffalo, N. Y. Case pending.

All of which is respectfully submitted,

Yours,

VERLETT C. BEEBE,

Assistant Commissioner.

REPORT OF WILLIAM T. HUGHES.

Hon. Charles A. Wieting, *Commissioner of Agriculture:*

Sir.—I have the honor to submit my report for the year ending September 30, 1897, as Assistant Commissioner of Agriculture in charge of the Eighth Division, comprising the counties of Cayuga, Monroe, Ontario, Seneca, Wayne and Yates. The work of the Department has been zealously prosecuted throughout the entire territory under my supervision, and I am much gratified with the results attained.

The adulteration of butter, cheese, milk, vinegar and other foods, is an offense which the consumer and honest producer are alike interested in suppressing. The evil consequences which attend the use of adulterated food cause the consumer to look to the Department for protection, while the producer, realizing that by so much as the food supply is adulterated is he damaged, is glad of all the assistance the Department can render by exposing and causing to be punished offenders against the law.

It has been the aim of all the officers of the Department employed in this division to acquaint, as far as we have been able, both producers and consumers with the purposes of the Department, while their services have been constantly exerted in the interest of both classes. The daily and weekly press of the division has frequently called attention to the work being performed by the Department of Agriculture, and has highly commended our efforts, especially for the improvement of the milk supply.

Milk.

The milk furnished the people residing in the cities and villages of this division, as well as that delivered at the various milk shipping stations during the year has generally been of a quality much above the standard established by the law of the State.

Special attention has been given to the sanitary condition of dairy barns, cheese factories, butter factories and creameries, and when the agents have found cause for criticism and reforms were not instituted, I have had such premises examined by a sanitary expert, and when he found the same to be in an unsanitary and filthy condition, I have asked for the prosecution of the occupants. The prosecution of these cases has resulted in bringing about a very great improvement in the condition of the cow-barns and cow stables in the city of Rochester and vicinity, where the worst cases were found to exist.

The milk dealers of the city of Rochester have gradually drawn on an increased territory for their supply of milk, while several stations for its shipment to the seaboard cities have been established during the year. Statistics and a record of prosecutions appear on other pages of this report.

Vinegar.

The supply in this division has been most abundant, and has generally been of high grade. The supply of farmer's cider vinegar has been very large, and in addition to this, we have the product of several vinegar manufactories constantly on the market, and the proprietors of these manufactories are deeply interested in suppressing the sale of adulterated vinegar. For the term covered by this report, the agents of the Department employed in this division, have found twelve samples of adulterated vinegar, a record of which may be found on another page.

Oleomargarine.

While careful examination of markets, stores, restaurants, hotels, boarding-houses, hospitals and other public institutions have been made, yet no oleomargarine or imitation butter has been found in the division. During the year covered by this report the price of genuine creamery and dairy butter has ranged very low, and this has undoubtedly helped to keep oleomargarine and imitation butter out of the market.

Sugar Beet Culture.

Interest in this new industry is developing very rapidly throughout this section of the State, and the question of building beet sugar refineries or factories is being agitated in several towns in this vicinity. I add hereto report of sugar beet experiment in this division, conducted by Mr. George W. Sime, of Brockport, Monroe county.

VILMORIN IMPROVED.

Net yield in pounds, one-fourth acre of ground..........	7,800

KLEINWANZLEBENER.

Net yield in pounds, one-fourth acre of ground..........	9,400

	Beet.	Per cent. sugar in juice.	Purity.
Vilmorin improved...........	14.40	15.16	75.80
Kleinwanzelebener	15.78	16.59	88.30

SUGAR BEET EXPERIMENT ACCOUNT.

1897.		
June 1.	Plowing ground..........................	$1 50
	Rolling and harrowing....................	1 65
	Picking stones...........................	2 25
June 2.	One-half day picking stones, and drilling phosphate	1 50
	Planting with hand drill..................	45
June 16.	Cultivating beets..........................	75
22.	Three men hoeing beets five hours...........	2 25
July 2, 3, and 6.	Thinning beets.....................	5 10
12.	Cultivating	45
13.	Four men hoeing beets four hours...........	1 80
18.	Cultivating	45
Aug. 28.	Pulling weeds	90
Oct. 28.	Preparing sample for Geneva.................	1 00
Oct. 29.	Express charges to Geneva..................	50
Nov. 4.	Harvesting beets...........................	4 80
Nov. 5.	Topping beets for factory..................	4 50
	Total expense account.....................	$29 85

Inspections.

The number of inspections of all kinds made during the year were as follows:

Number of specimens examined	23,484
Number of cans of milk examined	18,295
Number of dairies examined	372
Number of creameries examined	36
Number of vinegar factories examined	12
Number of barrels of vinegar examined	929
Number of packages of butter examined	4,270

MILK SHIPPED INTO ROCHESTER BY RAIL.

	Gallons
Received over N. Y. C. & H. R. and W. S. R. R	777,450
Received over N. Y., L. E. & W. R. R	400,405
Received over B., R. & P	29,735
Received over L. V. R. R	49,275
Received wagons from outside city limits	3,455,870
Produced from cows housed in city limits	500,000
Total cream shipped into Rochester by railroad	65,700
Total	5,378,435
Total for year ending September 30,1896	5,182,755
Showing an increase of gallons consumed during last over preceding year	195,680

Prosecutions.

MILK.

CASE No. 1664.

Settled by attorney for the people.

Attorney: Geo. S. Horton.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1665.

Settled by attorney for the people.
Attorney: Geo. S. Horton.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 1667.

Settled by attorney for the people.
Attorney: Geo. S. Horton.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 1670.

Settled by attorney for the people.
Attorney: Geo. S. Horton.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 1677.

Settled by attorney for the people.
Attorney: Geo. S. Horton.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 1680.

Settled by attorney for the people.
Attorney: Geo. S. Horton.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 1681.

Settled by attorney for the people.

Attorney: Geo. S. Horton.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1697.

Settled by attorney for the people.

Attorney: W. W. Armstrong.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 3157.

Supreme Court, Monroe County.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 3184.

Supreme Court, Monroe County.

Settled by attorney for the people.

Attorney: W. W. Armstrong.

Witnesses: Jos. M. Quigley and Geo. Bernhard.

Chemist: Samuel A. Lattimore.

CASE No. 3206.

Defendant found guilty and fined $25.

Attorney: W. W. Armstrong.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 3230.

Evidence in this case has been furnished attorney, but no action has been brought.

Attorney: John Y. Andrews, Jordan, N. Y.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 3246.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Chas. Sears.

Chemist: Samuel A. Lattimore.

CASE No. 3954.

Supreme Court, Monroe County.

Settled by attorney for the people.

Attorney: Otto Kelsey, afterward changed to W. W. Armstrong.

Witnesses: Jos. M. Quigley and Robert McAdam, Jr.

Chemist: Samuel A. Lattimore.

CASE No. 3959.

Supreme Court, Monroe County.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Jos. M. Quigley and Robert McAdam, Jr.

Chemist: Samuel A. Lattimore.

CASE No. 3960.

Supreme Court, Monroe County.

Settled by attorney for the people.
Attorney: Jas. M. E. O'Grady.
Witnesses: Jos. M. Quigley and Robert McAdam, Jr.
Chemist: Samuel A. Lattimore.

CASE No. 3962.

Settled by attorney for the people.
Attorney: Jas. M. E. O'Grady.
Witnesses: Jos. M. Quigley and Robert McAdam, Jr.
Chemist: Samuel A. Lattimore.

CASE No. 4035.

Supreme Court, Monroe County.

Settled by attorney for the people.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4036.

Supreme Court, Monroe County.

Settled by attorney for the people.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4037.

Supreme Court, Monroe County.

Settled by attorney for the people.

Attorney: W. W. Armstrong.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 4044.

Supreme Court, Monroe County.

Settled by attorney for the people.

Attorney: Wm. T. Plumb.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

VINEGAR.

CASE No. 1232.

Supreme Court, Cayuga County.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1233.

Supreme Court, Cayuga County.

Action discontinued on motion of attorney for the people, defendant having been tried in Recorder's Court before a jury, on the same charge, and found not guilty.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1234.

Supreme Court, Cayuga County.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1235.

Supreme Court, Ontario County.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1236.

Supreme Court, Ontario County.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1237.

Supreme Court, Seneca County.

Settled by attorney for the people.

Attorney: Jas. M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 1573.

Supreme Court, Wayne County.

Settled by attorney for the people.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

Criminal Prosecutions.

VINEGAR.

CASE No. 1233.

Recorder's Court, Auburn, N. Y.

Case tried before a jury and defendant acquitted.
Attorney: Jas. M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

MILK.

CASE No. 1702.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 1710.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 2736.

Police Court, Rochester, N. Y.

Settled by attorney for the people.
Attorney: Jas. M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3151.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: Jas. M. E. O'Grady.
Witnesses: Jos. M. Quigley and Robt. McAdam, Jr.
Chemist: Samuel A. Lattimore.

CASE No. 3159.

Police Court, Geneva, N. Y.

Defendant found guilty and fined $25.
Attorney: S. F. Lincoln.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3161.

Police Court, Geneva, N. Y.

Defendant found guilty and fined $25. Sentence suspended.
Attorney: S. F. Lincoln.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3162.

Police Court, Geneva, N. Y.

Defendant found guilty and fined $25.
Attorney: S. F. Lincoln.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3173.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: Jas. M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3189.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3192.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3199.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3243.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3244.

Police Court, Rochester, N. Y.

Case tried and defendant acquitted.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Chas. Sears.
Chemist: Samuel A. Lattimore.

CASE No. 3953.

Police Court, Rush, N. Y.

Action discontinued by attorney for the people.
Attorney: Otto Kelsey.
Witnesses: Jos. M. Quigley and Robt. McAdam, Jr.
Chemist: Samuel A. Lattimore.

CASE No. 3957.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 3963.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Jos. M. Quigley and Robert McAdam, Jr.
Chemist: Samuel A. Lattimore.

CASE No. 4006.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4043.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4045.

Police Court, Irondequoit, N. Y.

Defendant found guilty and fined $25. Sentence suspended.
Attorney: Wm. T. Plumb.
Witnesses: Jos. M. Quigley and Geo. Bernhard.
Chemist: Samuel A. Lattimore.

CASE No. 4365.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: Wm. T. Plumb.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4376.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Hugh C. Troy.

CASE No. 4415.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4416.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.

Attorney: James M. E. O'Grady.

Witnesses: Jos. M. Quigley and Geo. Bernhard.

Chemist: Samuel A. Lattimore.

CASE No. 4424.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.

Attorney: James M. E. O'Grady.

Witnesses: Jos. M. Quigley, Geo. Bernhard and Jas. E. Langdon.

Chemist: Hugh C. Troy.

CASE No. 4425.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.

Attorney: James M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley

Chemist: Samuel A. Lattimore.

CASE No. 4426.

Police Court, Rochester, N. Y.

Case pending.

Attorney: W. W. Armstrong.

Witnesses: Geo. Bernhard and Jas. E. Langdon.

Chemist: Samuel A. Lattimore.

CASE No. 4428.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4433.

Police Court, Rochester, N. Y.

Case pending.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jas. E. Langdon.
Chemist: Samuel A. Lattimore.

CASE No. 4444.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4445.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Chemist: Samuel A. Lattimore.

CASE No. 4446.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $25.

Attorney: James M. E. O'Grady.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Chemist: Samuel A. Lattimore.

CASE No. 5560.

Supreme Court, Cayuga County.

Case pending.

Attorney: W. W. Armstrong.

Witnesses: Geo. Bernhard, Abraham L. Feinberg and Chas. S. Griffen.

Chemist: Samuel A. Lattimore.

Keeping cows in a crowded or unhealthful condition.

CASE No. 1.

Police Court, Rochester, N. Y.

Defendant found guilty and fined $50. Sentence suspended.

Attorney: W. W. Armstrong.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Veterinary Surgeon: Chas. H. Cook.

CASE No. 2.

Supreme Court, Monroe County.

Settled by attorney for the people.

Attorney: W. W. Armstrong.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Veterinary Surgeon: Chas. H. Cook.

CASE No. 3.

Police Court, Rochester, N. Y.

Defendant found guilty. Sentence suspended.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Veterinary Surgeon: Chas. H. Cook.

CASE No. 4.

Police Court, Rochester, N. Y.

Defendant found guilty. Sentence suspended.
Attorney: James M. E. O'Grady.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Veterinary Surgeon: Chas. H. Cook.

CASE No. 5.

Supreme Court, Monroe County.

Settled by the attorney for the people.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Sanitary Expert: Dr. A. L. Haines.

CASE No. 6.

Supreme Court, Monroe County.

Settled by attorney for the people.
Attorney: W. W. Armstrong.
Witnesses: Geo. Bernhard and Jos. M. Quigley.
Sanitary Expert: Dr. A. L. Haines.

CASE No. 7.

Supreme Court, Monroe County.

Action pending.

Witnesses: Geo. Bernhard and Jos. M. Quigley.

Sanitary Expert: Dr. A. L. Haines.

Attorney: W. W. Armstrong.

In conclusion permit me to thank you for your counsel and assistance so frequently rendered me during the year.

Very respectfully yours,

WM. T. HUGHES,

Assistant Commissioner.

REPORT OF ASA L. TWITCHELL.

Hon. Charles A. Wieting, *Commissioner of Agriculture:*

Dear Sir.—I have the honor to submit to you this my second annual report of the work in this (the ninth) division, for the year ending September 30, 1897.

This division comprises the counties of Erie, Niagara and Orleans.

I have continued the work along the same lines that I commenced last year, and have had the earnest support of all the agents working with me, and I can especially recommend the work of our chemist, Dr. John A. Miller, who has analyzed all our samples. His reputation is such that his report has been taken without question in every case tried.

I find that I can keep all men at work looking after the milk supply in the cities of Tonawanda, Niagara Falls, Lockport and Buffalo, with the surrounding villages, cheese factories and creameries, vinegar, oleomargarine and stable inspection, and I think you will see by the number of cases brought and convictions secured that we have all been at work.

Contagious Diseases.

I have had only one case of supposed contagious disease and that was in the town of Sardinia, Erie county, where a local veterinarian pronounced the herd afflicted with a contagious lung trouble. Dr. Kelly, veterinarian for this Department, was sent to examine the animals and pronounced it acute rheumatism, prescribed for them, and they speedily recovered. I would add that they had been fed for a long time on ensilage made from immature corn and gluten meal.

Vinegar.

We still find some who are trying to evade the law by selling vinegar not up to the standard, mixing cider with distilled vinegar, and other forms of adulteration; but I think most of the manufacturers are in favor of and are trying to live up to the standard. Still I think there is some being made here and some shipped in that is mixed in such a proportion that it makes it hard to detect by analysis. Dr. Miller has been making extensive experiments along that line and informs me that he is now able to say for a certainty that they are mixed vinegars, and prosecution will be begun at once.

Prosecutions.

VINEGAR.

CASE No. 689.

Pending at close of last year. Defendant out of State and no action begun.

CASE No. 384.

Sample taken by agents, A. S. Delano and John R. Earl. Action begun in Supreme Court by E. O. Farrar, counsel, and compromised by him for $77.

CASE No. 373.

Action begun in Supreme Court by E. O. Farrar, counsel, and compromised by him for $75. Sample taken by A. S. Delano and John R. Earl.

CASE No. 374.

E. O. Farrar, counsel in the case, began action in Supreme Court compromised by him for $75. Sample taken by A. S. Delano and John R. Earl.

CASE No. 375.

E. O. Farrar, counsel, began action in the Supreme Court, and compromised the case for $75. Sample taken by A. S. Delano and John R. Earl.

CASE No. 377.

Action begun in the Supreme Court by E. O. Farrar, counsel, and compromised by him for $75. Samples taken by A. S. Delano and John R. Earl.

CASE No. 376.

Action begun in the Supreme Court and judgment obtained for $100 penalty and $90.97 costs; execution given to sheriff and returned unsatisfied; execution issued against the person; defendant arrested and admitted to jail limits. Case compromised for $100 by E. O. Farrar, counsel.

Witnesses: A. S. Delano and John R. Earl.

Chemist: John A. Miller.

CASE No. 378.

Action begun in Supreme Court by E. O. Farrar, counsel, who alleged in his complaint that the offense was committed in Erie county, when it should have been Niagara; so he compromised the case for costs and disbursements. Sample taken by A. S Delano and John R. Earl.

CASE No. 382.

Action begun in Supreme Court by E. O. Farrar, counsel, and compromised by him for $75. Sample taken by A. S. Delano and John R. Earl.

CASE No. 539.

Action begun in Supreme Court by E. O. Farrar, counsel, and compromised by him for $50. Sample taken by A. S. Delano and John R. Earl.

CASE No. 706.

Action begun in the Supreme Court and is pending.

CASE No. 708.

Action pending in the Supreme Court.

CASE No. 720.

Action begun in the Supreme Court, and E. O. Farrar, counsel, compromised the case for $50. Sample taken by William B. Reading and John J. Coughlin.

CASE No. 540.

Warrant issued by W. Hollister, J. P., in Tonawanda, April 30, 1897; defendant arrested and pleaded guilty; fined $50.

Counsel: Hugo S. Kinie.

Witnesses: A. S. Delano, John R. Earl, and chemist, John A. Miller.

CASE No. 701.

Warrant issued by Police Justice Thomas S. King of Buffalo, April 28, 1897; defendant arrested; pleaded guilty, and fined $50. Sample taken by Agent Hoffman Ruger.

OLEOMARGARINE.

We have kept a constant watch for this article, but have been able to find only three samples, one at a hotel at Niagara Falls and two in charitable institutions in Buffalo, who admitted that they had been using it for years. That at the charitable institutions was shipped under cover from some dealer in New Jersey; that at the hotel direct from the maker, in Chicago.

The following cases have been brought:

CASE No. 1455.

Action begun for penalty in Supreme Court, but compromised by counsel, E. O. Farrar, for $25. Sample taken by Agents William B. Reading and John J. Coughlin.

CASE No. 1456.

Action begun in the Supreme Court for penalty; compromised by E. O Farrar, counsel, for $35. Sample taken by Wililam B. Reading and John J. Coughlin.

CASE No. 1457.

Action begun in Supreme Court by E. O. Farrar, counsel, and compromised by him for $50. Sample taken by William B. Reading.

MILK.

I find that looking after the milk supply of Buffalo takes a large part of our time, as the city authorities have been doing very little in that line, leaving it nearly all to us. I find the milk there handled different than in most other large cities; each retail dealer making his contract direct with the producer for so much per day, usually for a year, commencing May 1st. The milk arrives in Buffalo between 8:30 and 11 a. m. for about eight months in the year; the other four, it is shipped morning and night. In nearly all cases the milk is not delivered to the consumer until the following day, and the temptation for the peddlers to help out their finances by taking off cream or adding water is more than many of them can stand; I find that the dealer is not always the direct cause of the milk being below standard, for some producers resort to the same methods, and were it not for us, the consumer would in many cases be getting very poor milk.

We have a regular system of inspection of the milk at the depots and on the streets, and I have tried to have the milk at each cheese factory and creamery inspected at least once during the season—some places we found it necessary to inspect two or three times.

I find that the value of milk sold in this division, for consumption in the cities and villages, is about $1,100,000.00 and that consumed in Buffalo is produced in the following counties in proportion about as named: Erie, Genesee, Niagara, Wyoming, Cattaraugus, Chautauqua, and Orleans, and is delivered in the following manner:

The New York Central and Hudson River Railroad:

I have been unable to get a detailed statement, but from figures obtained, estimate it at 1,000,000 gallons.

The Buffalo, Rochester and Pittsburgh Railroad:

	Gallons.
October, 1896	55,359
November, 1896	54,840
December, 1896	58,640
January, 1897	61,194
February, 1897	54,611
March, 1897	60,324
April, 1897	58,562
May, 1897	62,314
June, 1897	57,522
July, 1897	62,715
August, 1897	62,942
September, 1897	55,409
	704,462

	Gallons.
Lake Shore and Michigan Southern R. R. Co	25,713
West Shore Railroad	213,812
Lehigh Valley Railroad	197,656
D. A. V. & P. R. R................................	25,254
	462,435

Delaware, Lackawanna and Western Railroad:

October, 1896	69,444
November, 1896	66,960
December, 1896	70,561
January, 1897	71,670
February, 1897	66,706
March, 1897	75,334
April, 1897	76,266
May, 1897	85,554
June, 1897	85,668
July, 1897	95,774
August, 1897	98,134
September, 1897	88,943
Total	951,014

A. W. DECKER, *Auditor*.

W. N. Y. & Penn. R. R.............................	1,496,204
Erie & South Western did not wish to give amount. Estimated at	2,088,000
Wells, Fargo & Co.'s Express......................	75,000
American Express	15,000
Drawn on wagons	2,386,000
Total for Buffalo.................................	4,564,000

The average price paid producer, nine cents per gallon.

There have been seventy-five prosecutions for adulterated milk, classified as follow:

Peddlers in Buffalo	50
Storekeepers	1
Producers shipping to Buffalo	8
Peddlers in other cities and villages	3
Patrons of cheese factories and creameries	5
Total	67

Prosecutions.

MILK.

CASE No. 3660.

Warrant issued by Joseph Foster, J. P., in Cheektowaga, November 11, 1896; defendant appeared and pleaded guilty and fined $25.

Witnesses: F. E. Geise and M. Galligan.

Counsel: Hugo S. Kinie.

CASE No. 3659.

Defendant pleaded guilty before Justice Foster in Cheektowaga, November 11, 1896, and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and M. Galligan.

CASE No. 3810.

Warrant issued January 27, 1897, by Police Justice Thomas S. King; defendant arrested February 5th, arraigned, pleaded guilty and fined $25.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and M. Galligan.

CASE No. 3817.

Defendant arrested; pleaded guilty before George Huler, J. P., in Lancaster, February 6, 1897; fined $25.

Counsel: Hugo S. Kinie.

Witnesses: John J. Coughlin and Wm. B. Reading.

CASE No. 3818.

Warrant issued by George Huler, J. P., in Lancaster, February 4, 1897; arraigned; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 3692.

Warrant issued by Police Justice Thomas S. King, January 27, 1897; defendant arraigned on the 29th; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and Michael Galligan.

CASE No. 3696.

Warrant issued in Justice's Court, Cheektowaga, January 27, 1897; defendant arrested January 30th; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and M. Galligan.

CASE No. 3803.

Warrant issued by Police Justice Thomas S. King, January 27th; defendant arraigned; pleaded guilty January 28th; fined $50, and sent to penitentiary.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and M. Galligan.

CASE No. 3844.

Defendant pleaded guilty before Police Justice Thomas S. King, April 28, 1897; fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 3850.

Defendant arrested April 21, 1897; arraigned and pleaded guilty before Joseph Foster, J. P., in Lancaster.

Counsel: Hugo S. Kinie.

Samples taken by M. Galligan and John J. Coughlin.

CASE No. 4821.

Warrant issued by Joseph Huler, Esq., J. P., in Lancaster, April 21, 1897; defendant arrested; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and M. Galligan.

CASE No. 4864.

Defendant pleaded guilty before Police Justice Thomas S. King, June 14, 1897; fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 4862.

Warrant issued by Police Justice Thomas S. King, in Buffalo, June 4, 1897; defendant appeared June 8th; arraigned; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Witnesses: John J. Coughlin and Michael Galligan.

CASE No. 4865.

Warrant issued by Joseph Foster, J. P., in Cheektowaga, June 5, 1897; defendant arraigned; tried and convicted; fined $25.

Counsel: Hugo S. Kinie.

Witnesses: Wm. B. Reading and John R. Earl.

CASE No. 4868.

Defendant pleaded guilty in Police Court of the City of Buffalo, June 5, 1897, before Police Justice Thomas S. King; fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Michael Galligan.

CASE No. 4848.

Defendant arrested and pleaded guilty before Police Justice Thomas S. King, June 3, 1897; fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Michael Galligan.

CASE No. 4873.

Warrant issued by Police Justice Thomas S. King, June 10, 1897; arrested June 12th; arraigned; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Michael Galligan.

CASE No. 4882.

Defendant arrested and pleaded guilty before Police Justice Thomas S. King, June 11, 1897; fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Michael Galligan.

Action pending.

CASE No. 5214.

Defendant arrested August 21, 1897; arraigned before Police Justice Thomas S. King; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 5257.

Warrant issued by Police Justice Thomas S. King, September 7, 1897; defendant arraigned, pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Charles A. Warren and John R. Earl.

CASE No. 5258.

Warrant issued by Police Justice Thomas S. King, August 31, 1897; defendant arraigned; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Charles A. Warren and John R. Earl.

CASE No. 5256.

Warrant issued by Police Justice Thomas S. King, September 2, 1897; defendant arraigned September 11th; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Charles A. Warren and John R. Earl.

CASE No. 5222.

Warrant issued by Police Justice Thomas S. King, August 31, 1897; defendant arraigned September 2d; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Charles A. Warren and John R. Earl.

CASE No. 5206.

Warrant issued by Police Justice Thomas S. King, August 10, 1897; defendant arrested August 21st; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Michael Galligan and Charles A. Warren.

CASE No. 5209.

Warrant issued by Police Justice Thomas S. King.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 5229.

Defendant arraigned and pleaded guilty before Police Justice Thomas S. King, August 26, 1897.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 4898.

Warrant issued by Police Justice Thomas S. King, August 19, 1897; defendant arraigned August 24th; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Michael Galligan.

CASE No. 5234.

Warrant issued by Police Justice Thomas S. King, August 26, 1897; defendant arraigned September 1st; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 5238.

Defendant arraigned before Police Justice Thomas S. King, August 26, 1897; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 5236.

Warrant issued by Police Justice Thomas S. King, August 10, 1897; defendant arraigned; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Wm. B. Reading.

CASE No. 5249.

Warrant issued by Police Justice Thomas S. King, August 19, 1897; defendant arraigned; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John J. Coughlin and Michael Galligan.

CASE No. 5224.

Defendant pleaded guilty before Joseph Foster, J. P., in Cheektowaga, August 28, 1897; fined, $25.

Counsel: Hugo S. Kinie.

Samples taken by Wm. B. Reading and John J. Coughlin.

Cases pending: No. 4890, 5275, 5277, 3885, 3858, 5268, 5264, 3853, 5267, 2776, 5220, 4895, 4889 and 5259. Action begun in the Supreme Court for penalty, September 7, 1897.

CASE No. 5259.

Action begun in Supreme Court for penalty, August 31st, 1897.

CASE No. 3829.

Action begun in Supreme Court and compromised by E. O. Farrar, counsel, for $52. Sample taken by C. A. Warren and John R. Earl.

CASE No. 3631.

Action begun in Supreme Court and compromised by E. O. Farrar, counsel, for $50. Sample taken by John R. Earl and A. S. Delano.

CASE No. 4838.

Action begun in Supreme Court and compromised by E. O. Farrar, counsel, for $39. Sample taken by John R. Earl and C. A. Warren.

CASE No. 3809.

Action begun in the Supreme Court by E. O. Farrar, counsel; judgment entered for full amount and costs; execution returned unsatisfied. Execution issued against the person and case compromised, defendant paying $80.25.

CASE No. 3668.

Warrant issued by Police Justice Thomas S. King, November 13th; defendant tried, found guilty and fined $25.

Counsel: E. O. Farrar.

Witnesses: F. E. Geise and M. Galligan.

CASE No. 3831.

Action begun in Supreme Court; compromised by E. O. Farrar.

CASE No. 5248.

Action begun in the Supreme Court for penalty, September 15, 1897; compromised by counsel for $81.75. Sample taken by Michael Galligan and A. L. Twitchell.

CASE No. 4862.

Action begun in the Supreme Court, E. O. Farrar, counsel; compromised for $50. Sample taken by John J. Coughlin and Wm. B. Reading.

CASE No. 4861.

Action begun in the Supreme Court; compromised by E. O. Farrar, counsel, for $50. Sample taken by John J. Coughlin and Wm. B. Reading.

CASE No. 3819.

Action begun in the Supreme Court and compromised by E. O. Farrar, counsel, for $25, with costs. Sample taken by F. E. Giese and M. Galligan.

CASE No. 3667.

Warrant issued by Police Justice Thomas S. King, December 1, 1896; case tried; defendant found guilty and sent to the workhouse for fifty days.

Counsel: E. O. Farrar.

Witnesses: F. E. Geise and M. Galligan.

CASE No. 3833.

Action begun in the Supreme Court by E. O. Farrar, counsel, and compromised by him for $35. Sample taken by John J. Coughlin and Wm. B. Reading.

Cases pending: No. 3895, 3867, 3897, 5299, 3886 and 3054.

The following twenty-four cases in which action had been commenced at the close of the year ending September 30, 1896, have been disposed of as follow:

CASE No. 3613.

Action begun in the Supreme Court by E. O. Farrar, counsel, and compromised by him for $35, Sample taken by Wm. B. Reading and John J. Coughlin.

CASE No. 3261.

Action begun in the Supreme Court by E. O. Farrar, counsel, and compromised by him for $35. Sample taken by Wm. B. Reading and John J. Coughlin.

CASE No. 2758.

Action brought in the Supreme Court and compromised by the people's counsel, E. O. Farrar, for $35. Sample taken by John R. Earl and John J. Coughlin.

CASE No. 2950.

Action begun for penalty by the people's counsel, E. O. Farrar, and compromised for $35. Sample taken by Frank E. Geise and Michael Galligan.

CASE No. 3079.

Action for penalty begun in the Supreme Court by E. O. Farrar, counsel, and compromised for $35. Sample taken by Wm. B. Reading and John J. Coughlin.

CASE No. 2495.

Action begun in the Supreme Court. E. O. Farrar, counsel, accepted $25 and discontinued the case. Sample taken by John J. Coughlin and Wm. B. Reading.

CASE No. 3615.

Action brought in the Supreme Court, where judgment of $100 penalty and $28 costs was obtained; execution issued and returned unsatisfied.

Counsel: E. O. Farrar.

Witnesses: Frank E. Geise and Michael Galligan.

CASE No. 3603.

Pending in the Supreme Court.

CASE No. 3059.

Pending in the Supreme Court.

CASE No. 3620.

Warrant issued by Police Justice Thomas S. King, October 2, 1896; defendant appeared October 3d; pleaded guilty, and was fined $25.

Counsel: E. O. Farrar.

Witness: John J. Coughlin.

CASE No. 3607.

Defendant arrested October 28, 1896; tried before Police Justice Thomas S. King, and fined $25.

Counsel: E. O. Farrar.

Witnesses: Frank E. Geise and Michael Galligan.

CASE No. 3632.

Arrested November 2, 1896; tried before Police Justice Thomas S. King, found guilty, and fined $25.

Counsel: E. O. Farrar.

Witnesses: Frank E. Geise and Michael Galligan.

CASE No. 3639.

Warrant issued by Police Justice Thomas S. King, November 19th, but defendant has not been found.

CASE No. 3633.

Warrant issued by Police Justice Thomas S. King, December 3, 1896; defendant appeared but case adjourned from time to time until February 9, 1897, when he pleaded guilty and was fined $25.

Counsel: E. O. Farrar.

Witnesses: Frank E. Geise and Michael Galligan.

CASE No. 3106.

Warrant sworn out September 1, 1896; adjourned several times and then withdrawn at my request, as she would not pay a fine and would leave a family of small children if sent to the penitentiary.

Counsel: E. O. Farrar.

Samples taken by Frank E. Geise and Michael Galligan.

CASE No. 3145.

Warrant issued by Police Justice Thomas S. King, March 24, 1897; tried, found guilty, and fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Frank E. Geise and Michael Galligan.

CASE No. 2763.

Warrant issued by S. B. Parker, Police Justice at Niagara Falls, October 1, 1896; defendant appeared and pleaded guilty, and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John R. Earl and John J. Coughlin.

CASE No. 3096.

Warrant issued by Police Justice Thomas S. King, October 8, 1896; defendant appeared, pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Frank E. Geise and Michael Galligan.

CASE No. 3148.

Pleaded guilty before Police Justice Thomas S. King, October 7, 1896, and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by Frank E. Geise and Michael Galligan.

CASE No. 3083.

Warrant issued by Police Justice Thomas S. King, October 14, 1896; defendant arrested, pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by W. B. Reading and John J. Coughlin.

CASE No. 3111.

Defendant arrested, pleaded guilty before Police Justice Thomas S. King, October 16, 1896, and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and Michael Galligan.

CASE No. 3626.

Warrant issued by Police Justice Thomas S. King, November 9, 1896; pleaded guilty and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and Michael Galligan.

CASE No. 3655.

Defendant pleaded guilty before Police Justice Thomas S. King, October 31, 1896, and was fined $25.

Counsel: Hugo S. Kinie.

Samples taken by F. E. Geise and Michael Galligan.

CASE No. 3634.

Warrant issued by Joseph Foster, J. P., of Cheektowaga, November 13, 1896; defendant tried, found guilty and fined $25.

Counsel: Hugo S. Kinie.

Samples taken by John R. Earl and John J. Coughlin.

STABLE INSPECTION.

We have found many stables near Buffalo in a very bad condition, the owners feeding refuse from the city, such as still slops, malt, etc., and in many cases the cows were in a crowded condition.

There have not been any prosecutions for this offense, but we have tried to better the conditions by urging more room, better feed, etc., and I think in many cases our request has been complied with.

I think this is one of the most important branches of our work, as it effects directly the health of the people using the milk.

I think the people in this division are in accord with the Agricultural Law as it stands to-day, and I would especially thank Police Justice Thomas S. King of Buffalo, before whom most of our cases came, for the universal courtesy he has shown us.

Very truly yours,

ASA L. TWITCHELL,

Assistant Commissioner.

REPORT OF JAMES T. CLARK.

Hon. Chas. A. Wieting, *Commissioner of Agriculture:*

Dear Sir.—Allow me herewith most respectfully to submit my annual report as Assistant Commissioner of the Tenth Division, for the year ending September 30, 1897.

It has been the policy in this division to endeavor to suppress violations of the Agricultural Law with as little disturbance as possible, rather than making an effort to obtain a large number of cases for prosecution.

The aim in planning the work has been to avoid regularity in visiting any locality, but to have work frequently conducted in different parts of the division, in order that intending violators of the law may not be able to form any opinion as to when their goods are apt to be inspected, thereby holding them in constant fear of detection, and operating to discourage such practices.

Extreme caution has been exercised against accusing any person unjustly, with the result that but one sample has been taken for analysis during the year which did not prove adulterated.

Frequent consultation has been held with the chemist, experts and agents working in this division as to methods and details that would bring about best results, and in order that methods pursued might be harmonious and uniform.

The diligent, well-directed efforts of the experts and agents have materially raised the standard of purity of the articles with which we have to deal, and violations of the law are much less frequent than formerly.

Although the standard of purity is much improved, we find no occasion for lack of vigilance, as where few cases are brought to prosecution during the year the idea seems to obtain in the minds of the unscrupulous that danger is past and that it is safe again to return to nefarious practices.

We have endeavored to improve the condition of milk delivered to butter and cheese factories with respect to its effect upon quality of product manufactured, especially during the warmest weather when much of it shows bad flavor, by calling the attention of producers to the impossibility of making a fine article of either butter or cheese from milk already in process of decomposition, and by trying to show them that they are the direct losers from the lack of proper care which brings about such conditions.

We have also endeavored to impress them with the injustice of holding manufacturers financially responsible for losses accruing from inferior quality of product where it could be clearly attributed to the condition of milk furnished for manufacturing the same.

It would seem that either manufacturers are not invested with proper authority to refuse such milk as they deem unfit for their requirements, or they do not exercise such authority to the extent that would be most profitable for the patrons of factories and for themselves.

That our efforts along the lines of improvement as to quality, thereby increasing the prices received for product, and as to purity, thereby increasing the yield per one hundred pounds of milk, are appreciated, is evidenced by the fact that requests for the assistance of the experts and agents along these lines have been more frequent than heretofore, making it impossible with the force available to meet the demands during the summer months.

Nearly all milk consumed in cities and villages in this division is produced upon farms outside the cities, and the barns and premises where produced are in uniformly good condition.

A lack of knowledge in regard to the vinegar law seems to exist, especially among retail dealers, and some time has been used in educating them on this subject; demonstrating to them the quality of product in which they were dealing; where it seemed deficient admonishing them to be more careful in their purchases, and warning them that upon a second inspection suspicious samples would be taken for analysis.

Dairy schools in accordance with the provisions of what is known as the "Nixon Bill" and under the auspices of Cornell College of Agriculture have been conducted at Union Grange, Jamestown; Mayville Grange, Mayville, and sixteen butter and cheese factories throughout the division.

At these schools George A. Smith, Conductor of Dairy Instruction, and W. W. Hall, Instructor in Cheese-Making, in connection with the University Extension Work of Cornell University College of Agriculture, gave practical demonstration of improved methods in butter and cheese-making. Numbers of manufacturers and farmers from the surrounding country attended these meetings and seemed much interested in the work of the instructors.

Too much importance cannot be attached to the benefits derived from the work done under the appropriations made by this measure. The great advantages accruing are not at first apparent, but must eventually result in inestimable gain.

The system taught by these gentlemen will probably not at first be accepted as a whole by manufacturers who were so fortunate as to have the advantages of their teachings, but will be tried and gradually adopted as its utility becomes obvious, finally resulting in greater uniformity of product; and as a larger number of purchasers are attracted to a market where large quantities of a product uniformly suited to their needs is to be found, the financial gain cannot be overestimated.

Another feature of the work of Messrs. Smith and Hall greatly appreciated by the manufacturers is that of educating producers in the better care of milk. The high standing of these gentlemen among educators in dairy husbandry, together with their extended experience, gives an importance to their admonitions that is usually heeded. It is to be hoped that these experts will again visit this division next season, and be in a position to give us more of their valuable help.

The large attendance and intense interest manifested at Farmers' Institutes demonstrate the popularity of that branch of the Department.

Too much credit cannot be given Hon. F. E. Dawley, Director, and his able corps of conductors and speakers for the efficient service rendered along the line of practical education for farmers. It is gratifying to learn that Mr. Dawley's success is winning fame for him in other States.

The plan of employing as speakers persons who are putting into practice the improved methods advocated, and are thereby able to give details as to plans, expenses and results, and to answer questions from the standpoint of the farmer, establishes confidence with the audience and leads to more general adoption of the methods discussed.

In traveling through the country during the present autumn it is pleasant to note that more silos have been constructed or are in process of construction than in previous years, and that more attention is being given to repairing and rebuilding barns in order that warmer and more comfortable quarters may be furnished for live-stock.

It is regrettable, however, that there are still so many farmers who are willing to suffer the inconvenience of miles of travel over bad roads and in cold weather without ever obtaining benefit from their exertions by putting into practice the lessons taught, notwithstanding the obviously greater profits derived by more progressive neighbors.

The sugar beets planted on the experimental plat in this division came up well with good prospects of a successful crop, but when up to a height where the rows could be seen nicely, large spaces were eaten out by a worm about three-fourths of an inch in length, resembling the common white grub. The remaining plants were well cared for and harvested according to your instructions. The analysis shows a sugar content of 14 per cent., and a purity of 76 per cent.

The soil of this plat is a light, sandy loam, very warm and dry, and the beets were overripe at the time of harvesting, probably diminishing the sugar content to some extent thereby. A number of other plats were planted in this division under varying conditions, with analyses ranging from 14 to 21 per cent. in sugar content and from 75 to 88 per cent. in purity, thoroughly demonstrating that the soil and climate of western New York are well adapted to the cultivation of this valuable crop.

Mr. John E. Kruse of Springville was appointed an expert and agent for the division August 1st, and has since devoted his entire time to the work, rendering valuable service.

Detailed Report of the Work Performed.

The following is the record of the work performed by each of the employes in this division during the year:

W. J. Corbett —

Number of butter factories inspected	23
Number of cheese factories inspected	50
Number of cities and villages inspected	9
Number of shipping stations inspected	3
Number of dairies at farms inspected	9
Number of stores inspected	140
Number of samples of milk tested	1,982
Number of samples of vinegar tested	140
Number of samples of milk sent to chemist	1
Number of samples of vinegar sent to chemist	5
Number of samples of milk below standard	1
Number of samples of vinegar below standard	5
Number of days attending court	3
Number of days collecting statistics	4

C. B. Wakefield—

Number of butter factories inspected	6
Number of cheese factories inspected	73
Number of cities and villages inspected	14
Number of shipping stations inspected	3
Number of stores inspected	157
Number of samples of milk tested	2,212
Number of samples of vinegar tested	193
Number of samples of milk sent to chemist	14
Number of samples of vinegar sent to chemist	5
Number of samples of butter sent to chemist	2

Number of samples of milk below standard	13
Number of samples of vinegar below standard	5
Number of samples of oleomargarine	2
Number of days attending court	6
Number of days collecting statistics	8

John E. Kruse—

Number of butter factories inspected	1
Number of cheese factories inspected	45
Number of stores inspected	7
Number of villages inspected	1
Number of samples of milk tested	1,064
Number of samples of vinegar tested	9
Number of samples of milk sent to chemist	1
Number of samples of milk below standard	1

J. P. Clark—

Number of butter factories inspected	11
Number of cheese factories inspected	28
Number of cities and villages inspected	11
Number of stores, hotels and restaurants inspected	190
Number of samples of butter inspected	210
Number of samples of milk tested	1,100
Number of samples of vinegar tested	45
Number of samples of butter sent to chemist	2
Number of samples of milk sent to chemist	3
Number of samples of milk below standard	3
Number of samples of oleomargarine	2

Dr. William E. McDuffie—

Number of samples of milk analyzed	3

Dr. E. P. Vandenbergh—

Number of samples of milk analyzed	8
Number of samples of vinegar analyzed	5
Number of samples of oleomargarine analyzed	2

Dr. Hugh C. Troy—

Number of samples of milk analyzed	5

Prosecutions.

MILK.

The cases reported at the close of last year have been disposed of as follows:

LABEL No. 2995.

THE PEOPLE *v.* LYMAN TRAPHAGAN.

Counsel: D. C. Reilly, Randolph, N. Y.

Appealed by defendant to General Term, and verdict obtained in Supreme Court in favor of the People sustained.

LABEL No. 2060.

THE PEOPLE *v.* HORACE PHILLIPS.

Counsel: Hon. J. S. Whipple, Salamanca, N. Y.

Brought to trial at Randolph, N. Y., December 18, 1896, before C. G. Davie, of Salamanca, N. Y., as referee, and judgment obtained for $100.

Appealed by defendant and judgment sustained.

Witness: C. B. Wakefield.

Chemist: W. E. McDuffie.

LABEL No. 2424.

THE PEOPLE *v.* JAMES A. HAYHOUSE.

Supreme Court, Mayville, N. Y.

Brought to trial May 3, 1897. The defense in this case furnished an analysis of the sample delivered to the defendant, analyzed more than six months after the time of delivery. This analysis was considered competent by the jury, and as it was above standard in both fat and total solids, the jury rendered a verdict of no cause of action.

Counsel: Leon L. Fancher.

Witnesses: W. J. Corbett, J. P. Clark.

Chemist: Wm. E. McDuffie.

From the experience of the prosecution in this case it would seem desirable that some reasonable limit of time within which the sample must be analyzed should be fixed by law, as it is probable that some evaporation from this sample had taken place during the six months which it was held by the defense before being analyzed.

LABEL No. 3320.

THE PEOPLE v. SAMUEL D. KARR.

The counsel for the people decided not to prosecute this case on account of destitute circumstances of the defendant, and misfortunes of fire and sickness with which he had met since the time of taking sample.

Counsel: Hon. Fred A. Robbins.

LABEL No. 3314.

THE PEOPLE v. ALONZO RANSOM.

Penalty of $100 and costs, $15 paid to counsel December 31, 1896.

Counsel: Hon. George E. Towne.
Witness: C. B. Wakefield.

MILK.

LABEL No. 2405.

THE PEOPLE v. MIKE SULLIVAN.

Court of Special Sessions.

J. H. Seymour, J. P., Salamanca, N. Y.
Defendant appeared and paid penalty of $100 to court.
Counsel: Hon. J. S. Whipple.
Witness: C. B. Wakefield.
Chemist: W. E. McDuffie.

LABEL No. 3319.

THE PEOPLE *v.* SAMUEL MERRIFIELD.

Defendant absconded.

Counsel: Hon. J. S. Whipple.

OLEOMARGARINE.

LABEL No. 411.

Police Court, Jamestown, N. Y.

Police Justice A. Hazeltine.

Brought to trial April 20, 1897. The defense in this case came into court with an analysis of pure butter, analysis conducted by Herbert M. Hill of Buffalo, N. Y., who also testified that the wire fastening the cork into the bottle was uncut and the seal unbroken when delivered to him. The seal on the top of the cork was intact when the bottle was produced in court and the label fully identified. The prosecution is much indebted to Dr. F. P. Vendenbergh, of Buffalo, chemist for the State in this case, for his able assistance in demonstrating to the jury the impossibility of so wide a difference in the analysis of the duplicate samples, except by the analysis of two different substances, the probable removal of the cork in some manner, and the substitution of pure butter for the original content. The evidence for the people was fortified by applications for express and post-office money orders purchased by defendant and payable to Armour & Co. of Chicago; way bills for butterine shipped by them to defendant at Union City and Dunkirk, and receipted for by him under assumed names; identification furnished by employees of railways at these points; waybills and freight receipts showing the reshipment of the goods to Jamestown as butter, from whence it was hauled to the premises of defendant near the Pennsylvania State line and sold in that State. The suspicion of the authorities in Pennsylvania apparently being aroused, he became alarmed and disposed of the last of the goods in the city of Jamestown.

Mr. L. C. Jagger, who was foreman of the jury, is an analytical chemist, and rendered valuable service in demonstrating the facts of the case to the jury. The jury called for both bottles offered in evidence. After being out several hours and thoroughly examining the bottles in which samples were taken, they rendered a verdict of guilty. The Court imposed a fine of $50. It is understood that a penalty and fine of $530 was afterwards imposed on this defendant by the United States Court.

VINEGAR.

The following are the cases for prosecution of which counsel have not yet been employed: Labels, Nos. 426, 424, 425, 447, 448.

MILK.

Labels, Nos. 3301, 3311, 3261, 3309, 3303, 3263, 3315, 3318, 3291, 3392, 3279, 3290, 3288.

I am pleased to say that your efforts to improve the condition of agriculture and the purity of the products which come under your supervision are well appreciated in this division, and the Department was never in better repute.

Allow me to extend thanks to you personally for the many courtesies received at your hands; to Assistant Commissioner George L. Flanders, and the employees of your office at Albany, for the promptness with which every need of the department in this division has been supplied; to Chemists Dr. W. E. McDuffie and Dr. Hugh C. Troy, for valuable counsel and advice furnished in addition to their regular duties; to Instructors Geo. A. Smith and W. W. Hall, for their earnest efforts to improve the quality of manufactured products and to Agents W. J. Corbett, C. B. Wakefield, P. H. Kelly and John F. Kruse, for the zeal and care which they have manifested in the work.

Yours respectfully,

J. P. CLARK,

Assistant Commissioner.

REPORT OF MICHAEL QUIGLEY.

Hon. CHAS. A. WIETING, *Commissioner of Agriculture:*

Dear Sir.—I respectfully submit my report from December 28, 1896, to this date.

On December 29, I was called to Brantingham Lake, Lewis county, and examined the cattle on the premises of H. H. Irish and Ward Brooks at that place, whose herds had been reported to this department as suffering from tuberculosis. I could find no symptoms or indications of the disease in either herd.

On January 15, 1897, complaint was made by L. J. Wart, Lacona, Oswego county, that the hogs were affected by some contagious disease. In company with Dr. W. H. Kelly, V. S., I went to that place and Dr. Kelly killed one pig and made a post mortem examination. He sent specimens of the organs to Dr. V. A. Moore, Bacteriologist of the State Veterinary College at Cornell University, for examination, who failed to find the bacteria of any infectious disease.

On January 16th, Dr. Kelly and I went to Oswego and examined the hogs on the premises of L. Gadbaugh, in the town of Scriba, who had reported that his hogs were suffering from hog cholera. A thorough examination failed to show any hog cholera on the premises.

January 24th, I was directed to proceed to Warwick, Orange county, and examine all cows and stables owned by patrons who were furnishing milk to the Warwick Valley Farmers' Association at that place. I commenced work on January 26th and examined six hundred and two cattle and twenty-two stables. The cows were found all in good health and condition, with the exception of one, and her condition was due to old age. No symptom of disease was found in any of the herds. The stables with one exception were the cleanest I have found in the State, a great many of them having running water for each animal, and in many cases the cows were carded and cleaned every day. As a whole this association is to be commended in setting an example of cleanliness which might well be followed by other farmers and milk producers in the State.

On January 29th, I went to Auburn and examined the hogs on the farm of Frank Ingalls, about five miles north of that city, which were reported to the Department as suffering from some contagious disease. On my arrival there I learned that forty had died recently and a number were ill at the time. These hogs had been fed on swill from the State Prison at Auburn. I telegraphed to Dr. V. A. Moore, Professor of Pathology and Bacteriology at Cornell Veterinary College, who came there at once and made a post mortem examination and took specimens of the organs for a bacteriological examination, which showed the disease to be swine plague. Dr. Moore then commenced an experiment on this herd by inoculation with swine plague serum, which was kindly furnished by the Bureau of Animal Industry at Washington, D. C., for the purpose, and which was prepared by Dr. E. A. de Schweinitz, Bio-chemist of that Bureau, and the results are fully set forth in Dr. Moore's report to this Department.

February 4th, in company with Dr. Moore, I went to Mannsville, Oswego county, and examined the hogs on the premises of B. E. Waterman who reported that they were dying from some unknown disease. An examination of the hogs and premises showed that it was clearly a case of starvation.

On February 11th, an outbreak of hog cholera was reported at Batavia, N. Y., and that a number of hogs had died. I went there in company with yourself and Dr. V. A. Moore to investigate the matter. We examined hogs on the premises of W. W. Ware, H. Swayze and a Mr. Martin. A bacteriological examination by Dr. Moore failed to show germs of either hog cholera or swine plague among these herds.

February 25th, I was directed to proceed to Rome, N. Y., and investigate an alleged contagious disease among the hogs of R. Conley at that place. On arriving there on February 26th, I found eighteen hogs alive, two ill and one dead. I learned that for some years Mr. Conley had been in the business of raising hogs and had been feeding them on swill and refuse from hotels in Rome. In the fall of 1896 he lost sixty-eight hogs from disease, and in 1895 he had also lost some. The trouble at this place seemed to come from hotel swill and as I had in the past had a number of such instances brought to my notice at Niagara Falls, Oswego, Rome, Syracuse and Hudson, N. Y., where large numbers of hogs had died from feeding hotel swill and refuse, I consulted with Dr. Moore at Cornell University who has since pursued a series of investigations along this line for the purpose of determining the cause of the sickness and loss produced by feeding this class of food. For further information on this subject consult Bulletin No. 141, issued by Cornell University Agricultural Experiment Station.

On March 20th, I examined the cattle on the farm of Morell Ketchum near Tyner, Chenango county, and found five cows affected with anthrax. Six had died from this cause prior to my arrival. I quarantined this herd, and advised as to their further care. They were under the treatment of a veterinarian at Oxford, near there, and I have heard of no further cases in that vicinity since.

April 7th, I went to Canajoharie, and examined the herds of cattle, and inspected the stables of the various farmers in that section who sold milk to the Canajoharie Creamery Co. at that place. I examined 1,210 cattle and inspected 67 stables. No infectious or contagious disease was found among these herds, and while in all cases the cattle seemed to have plenty of good food and bedding, yet in several instances sufficient attention was not given to cleanliness, and some stables were very filthy, and I think too much cannot be said to farmers upon the subject of well ventilated and clean stables.

On May 3d, I went to Cattaraugus, N. Y., and examined the herd of cattle on the farm of A. B. Harvey, two miles east of that place. I found them in a very poor physical condition and suffering from malnutrition and rheumatism. I then went to Silver

Creek and consulted with Dr. R. M. Evarts, health officer, in reference to a cow affected with lump jaw and owned by John Grant of Irving, near by. The cow was quarantined and the sale of milk prohibited.

On July 15th, I went to Cherry Creek, Chautauqua county, to examine the cattle on the farm of J. G. Champlin, who had reported his cows as suffering from some contagious disease. I found the cattle all in good health. Mr. Champlin had lost six cows in 1895, fourteen sheep in 1896, and one cow on July 12th. I was unable to tell the cause of their death, but from his story it appeared to be anthrax.

On October 17th, I examined the herds of milch cows on the farms of John Wilson and D. C. Atwater in the town of Chemung, Chemung county, and found both herds in excellent condition. These herds were supplying milk to a local milk dealer at Waverly, N. Y., who complained of ropy and stringy milk. I learned at the same time that he was also getting milk from a dairy across the State line in Pennsylvania, but of course I could not go and examine that herd.

On October 27th, I examined the herd of cattle on the farm of Mrs. Isaac Seeber, near Little Falls, N. Y., and found one cow badly affected with tuberculosis. Mrs. Seeber informed me that she would have the cow killed the next day and the carcass disposed of. This case was promptly referred to the State Board of Health.

On November 6th, I examined the herd of cattle on the farm of George Wood at Brescoe, Sullivan county, and found one heifer ill with anthrax. He had previously lost six from the same cause. I had the cattle removed to high ground, and advised the owner as to their care, and have heard of no other cases there since.

On November 8th, I examined the dairies and stables of farmers who sold milk to the milk station of H. Chardavoin at Hoopers, N. Y., on the Erie railroad. Number of stables inspected, 25; number of cattle examined, 291. I found no disease of any kind among these cattle. The food used was mainly corn and oats ground, in some cases Buffalo feed, or gluten, so called, but no ensilage. The stables in general were fairly clean, but in some instances were very filthy. From my experience during the past year, there appears to be a large field for missionary work among milk producers in this State, in the matter of cleanliness and sanitary condition of their stables.

November 11th, I went to Elmira and examined the cows on the farm of T. Mathews, near there. This herd had been under surveillance for some time, by reason of an outbreak of anthrax on the adjoining farm, and also several deaths in this herd during last summer. They all appeared to be in good health at the time of my visit, and I have heard of no disease there since.

On November 19th, I went to Arcade, N. Y., and in company with Assistant Commissioner V. O. Beebe, examined the cows on the farm of John J. Sullivan, six miles from that place. I found two cows suffering from anthrax and four calves had died prior to my arrival. The premises were extremely filthy, horses, cows, chickens and turkeys were all kept together in one barn, the chickens roosting over the cows. I quarantined the premises, stopped the sale of milk, and ordered it destroyed, gave directions to the owner to commence a general cleaning up at once and to use disinfectants, also advised him as to the care of his sick animals. Mr. Beebe has since written me that no more deaths have occurred in this herd.

Very respectfully yours,

M. QUIGLEY.

REPORT OF WM. HENRY KELLY

Hon. CHARLES A. WIETING, *Commissioner of Agriculture:*

Dear Sir.—I have the honor to make the following report on the investigations of infectious animal diseases which I have made during the year in accordance with your instructions:

1. Texas Fever.

In reply to the letters which you received from the United States Department of Agriculture and the cattle commissioner of Massachusetts, under date of September 9, 1897, which were handed to me to investigate, will state the following: As stated in the letter a number of milch cows which had passed through West Albany en route to Brighton, Mass., died a few days after their arrival. The Bureau of Animal Industry quarantined the Brighton Yards for export trade, believing that the cattle were infected there. The cattle commissioner of Massachusetts thought this a mistake. As they came from this State and were fed and watered at West Albany, the only place that they were unloaded, it seemed to that committee that the cattle were infected at West Albany, consequently they refused to receive cattle from this State until an investigation was made.

I visited West Albany to ascertain if any quarantined cattle had been unloaded during the spring or summer. I called on the superintendent of the West Albany Stock Yards, who informed me that to his knowledge no quarantined or southern cattle had been unloaded in these yards. I made the same inquiry of the bookkeeper and he replied in the negative. He kindly allowed me to examine his books and gave me dates of all the livestock that had passed through the yards from April 10th until August 31st.

A few days after the receipt of the above-named letters, Dr. Cooper Curtice called and informed Assistant Commissioner Flanders that he represented the Massachusetts Board of Cattle Commissioners, and that while at West Albany, he learned that I had been on the ground prior to him investigating the same outbreak. He thought it would be a mutual benefit to work together.

The history of the source, transportation, distribution and subsequent death of the cattle concerned in the outbreak in Massachusetts and Connecticut, was obtained mainly through the efforts of Commissioner Dennan of the Massachusetts board, and W. B. Sprague, commissioner of domestic animals, Connecticut.

July 31st, Mr. E. N. Smith purchased a carload of cows near Herkimer, N. Y. These cows were loaded at that place in car, 10,028, R. W. & O., consigned to N. Morey. They were purchased from the following parties:

William Cotter, Little Falls, N. Y.	9
A. L. Eaton, Little Falls, N. Y.	6
V. Farrel, Newport, N. Y.	1
James Moone, Coldbrook, N. Y.	2
James Doyle, Newport, N. Y.	1
	19

They arrived at West Albany Stock Yards on Sunday, August 1st, where they were unloaded to be fed and watered. All cattle are unloaded at the same platform. They were driven up alley F to alley C, across alley C to alley D, up alley D into yard 16, where they remained for a few hours to be fed, watered and rested. They were driven over the same alleys to be reshipped. On their arrival at the Brighton Stock Yards Monday night, August 2d, they were driven into yards 11 and 13—Texas alley—then into yards 34 and 35; thence they were released and thirteen of them died within fifteen days after arrival.

They were purchased by the following persons:

C. A. Denman, Pepperell	2
Jonathan Davis, Sterling	1
Mr. Lumie (sold to Dedham, McGowan)	3
Mr. Horton, Fall River	3
W. J. Navell, Lexington	1
A. S. Gushee, Dorchester	1
Cash (name of purchaser not known)	1
George Durth	1
	13

The first one was taken sick a week from the following Saturday, and died on the 17th. Another of the same carload was taken sick on August 17th, and died August 20th. Three others were brought out of the same car, and they lived about ten days, and one was brought out and lived one week after purchase, dying August 11th. Another died in nine days from the date he was brought into the Brighton Yards.

On July 31st, Mr. M. W. Odell of Roxbury, Conn., bought 18 cows, 9 heifers and 4 calves in St. Lawrence county. They were shipped from Norwood, N. Y., in car No. 22931, N. Y. C., consigned to New Milford, Conn., via West Albany. They arrived at West Albany Sunday, August 1st, were unloaded and driven over the same alleys as the previous cattle, put into yard 15, alley D, where they were fed and watered. They were reshipped on Monday, August 2d, and reached their destination on Tuesday, August 3d.

They were driven to Mr. Canfield's farm, two miles distant from New Milford. On August 4th, they were driven to Roxbury, and kept on Mr. M. W. Odell's farm, in a separate field from other cattle, and were sold as follows:

August 5th, N. N. Allen, Pawling, N. Y., 2 cows; 2 died.

August 5th, William O'Brien, Roxbury, Conn., 1 cow; 1 died.

August 5th, Alonzo Whitehead, Roxbury, Conn., 1 cow.

August 5th, Charles Botchford, Roxbury, Conn., 2 cows; 1 died.

August 9th, G. W. Hulburt, Roxbury, Conn., 2 heifers (2 years old).

August 16th, Anthony Mazotos, Naugautuck, 1 cow.

September 9th, C. H. Sanford, Bridgewater, 1 cow.

September 15th, Chas. Botchford, Roxbury, 1 cow.

October 1st, now in lot, Roxbury, 5 cows.

October 1st, now in lot, Roxbury, 5 heifers.

Buried in lot, 3 heifers (died).

Buried in lot, 3 heifers (died).

Dr. Curtice having visited Connecticut informed me that out of 27 head, 10 had died. One heifer that was temporarily sick recovered. Mr. Odell found some ticks on her. The following notes which were obtained by Dr. Curtice while in Connecticut and were given to me by him will indicate the character of the disease and the post-mortem appearance as near as it could be described:

"Mr. O'Brien's cow was taken sick Friday, August 13th and died Sunday night, August 15th. She was examined Monday morning. The flesh looked well; the spleen enlarged, soft, pulpy and dark; the gall bladder enlarged with thickened contents, the kidneys dark, the lungs and heart normal, the intestines apparently normal but empty, the bladder full of dark colored urine, body not bloated. Mr. O'Brien reported that the cow passed dark red water while sick.

"Mr. Odell's cow calved August 14th, cleaned and seemed well, but did not come to her milk. Appeared sick Monday, August 16th, and died Tuesday night, August 17th. She passed red water on August 15th. She was post-mortemed Wednesday afternoon by Mr. Canfield, Mr. Odell and Dr. R. A. Todd of New Milford. The symptoms were almost identical with those of Mr. O'Brien's cow.

"On Tuesday afternoon, August 17th, one cow was found dead in the pasture and two missing. The missing cows were found Wednesday—one dead the other sick.

"On Thursday afternoon, August 19th, a three-year-old heifer, apparently in a dying condition, was killed to hold post-mortem, in the presence of Commissioner Sprague, Mr. Canfield and others. She had the appearance of the O'Brien and other cows. One cow was observed ill on August 19th, while the commissioner was there. She died Saturday, August 21st.

"Messrs. D. H. Canfield and H. M. Canfield, South Britain, saw ticks on the Odell cow. They were about the size of wheat grains. Dr. R. S. Todd, veterinarian, of New Milford, Conn., saw the post-mortem of Mr. Odell's cow and reported intestines empty, the manifolds baked, the lungs and heart normal, the liver and spleen enlarged, bladder filled with black urine, and gall bladder filled with cheesy gall.

"He also saw two others, which he says were in almost the same condition, but the spleen was not nearly so large. It was, however, larger than normal, and dark. One had yellowish cast to liver. The temperature of cows that he took ranged from 105° to 106.4° F. One Ayrshire was sub-normal, 98° F. This cow died that night after Dr. Todd left.

"Walter Booth, a butcher, opened at least three cows. All had red water in bladder, one had a very soft liver, one had very black gall, the spleen in one was about twice the usual size; in others larger than usual."

On August 7th, Mr. George N. Smith purchased seventeen cows and one bull in Jefferson county, N. Y., from thirteen farmers, as follow:

	Bull.	Cows.
Rush Pennal, Pamelia, N. Y	.....	1
Mr. Zimmerman, Pamelia, N. Y	.....	1
C. Klock, Pamelia, N. Y	.....	1
Wm. Reese, Evans Mills	.....	2
D. A. Rich, Watertown	.....	1
Wm. Weale, Watertown	.....	1

	Bull.	Cows.
Charles Hawley, Ellisburg	.....	2
George Butts, Ellisburg	.....	2
Mr. Scott, Ellisburg	.....	1
John Eastman, Ellisburg	.....	1
A. C. Davis, Ellisburg	.....	1
Mr. Griffin, Rutland	1	2
Charles Ferguson, Rutland	.....	1
	1	17

These were shipped from Watertown in car No. 10,033, R., W. & O. They were consigned to J. S. Henry, Brighton, Mass., via West Albany. They arrived at West Albany on Sunday, August 8th, where they were unloaded to be watered, fed and rested. They were driven over the same alleys as the preceding carloads and put into yard 16, Alley D. They were reshipped in the afternoon and arrived at Brighton, Monday, August 9th. On arrival, they were driven into pens 11 and 13—Texas alley—thence into pens 34 and 35, from which the majority of them were sold. Out of this carload, seven died, as follows:

C. A. Dennan, Pepperell	1
E. B. Wilbur, West Bridgewater	3
Walter Dennis	1
Wm. Bowen, Providence, R. I	2
	7

On August 14th, Mr. Geo. N. Smith purchased twenty-two cows in Jefferson county, from the following persons:

Mr. Colon, Cape Vincent, N. Y	1
"Abe," Cape Vincent, N. Y	2
Mr. Vincent, Cape Vincent, N. Y	3

Mr. Walker, Cape Vincent, N. Y	2
Louis Ives, Freed Settlement, N. Y	1
W. R. Smith, Antwerp, N. Y	4
David Taylor, Antwerp, N. Y	1
Mr. Mason, Antwerp, N. Y	1
Wm. Umpstead, Freed Settlement, N. Y	4
D. A. Rich, Watertown, N. Y	1
John Leahr, Dexter, N. Y	1
L. Hill, Dexter, N. Y	1
Total	22

These were shipped from Watertown in car No. 23,035 N. Y. C., and consigned to J. S. Henry, Brighton, Mass., via West Albany. They arrived at West Albany, Sunday, August 15th, where they were unloaded and driven over the same alleys as the preceding cars and put into yard 17, Alley D. They were reshipped the same day, and arrived at Brighton, Monday, August 16th, and put into the same yards as were the preceding cars. Fifteen of these cows died within fourteen days, 3 within ten days from the date of arrival.

I am informed that specimens of the spleen and kidneys of these animals were sent to Drs. Frothingham, Theobold Smith and G. B. Foss, who reported that they found the micro parasite (*Pyrosoma bigeminum* Smith). This would positively determine that the animals from which the specimens were taken died from the results of "Texas fever."

After receiving the list of quarantined cattle which had been shipped through and into the State, kindly furnished by the Bureau of Animal Industry, I noticed that on June 2d two carloads of southern quarantined calves were shipped from East St. Louis in cars Nos. 15,185 and 15,099, W. S. They were consigned to D. Harrington, New York city.

Comparing this with the list of cattle which had been fed at West Albany, I found that on June 5th, D. Harrington, New

York, had two carloads of calves, No. 15,099 and No. 15,185, W. S., fed and watered at West Albany. These were driven up Alley F, to Alley C, to Alley D, and were put in yards 14 and 15, Alley D; also on June 14th, a carload of quarantined calves, car No. 23,033, N. Y. C., left East St. Louis and arrived at West Albany, June 18th. They were fed and watered in yard 16, Alley D. On June 15th, car No. 22,989, N. Y. C., left E. St. Louis and arrived at West Albany June 19th. They were fed and watered in yard 17, Alley D. Both these cars were consigned to D. Harrington, New York city.

This explains how these yards were infected, as the dates of these correspond to the outbreak of the disease. During August a number of colts and convalescent horses were allowed to run in Alley D, and yards 14, 15, 16 and 17, and since that time I have picked from them a number of *Boophilus bovis* ticks.

On September 30th I was called to see a cow at the Little Sisters of the Poor, on Central avenue, Albany. On arrival I was informed by the Mother Superior that the cow had been purchased about a week before, from a man named Smith, at West Albany, but as she was suffering from mammitis, Mr. Smith would not deliver her until apparently well, which was about four days prior to my visit, Monday, September 27th.

The symptoms were elevation of temperature, loss of appetite and the passing of bloody urine. I immediately diagnosed it as "Texas fever." I called upon Mr. Smith and was informed by him that he purchased her from the Shaker settlement. This animal was permitted to run through Alley D and yards adjoining, while owned by Mr. Smith. She died October 2d.

Dr. Curtice having returned from his trip to Connecticut, accepted my invitation to be present at the post-mortem, which was held that afternoon at the fertilizer establishment of F. Muckel. The muscles were bright, as if partly bled; the lungs normal, excepting a small area in the posterior portion, which was partially hepatized; the heart was firmly contracted; posterior mediastinal and the left bronchial lymphatic glands contained a few caseous gritty foci of tubercular origin; the spleen was very much enlarged, with the characteristic blackberry jam appearance upon section; liver very much enlarged and of a decided yellowish cast; gall bladder full of thickened gall; kidneys very dark upon section; bladder full of dark red urine.

Cover glass preparations made from the blood of heart were sent by Dr. Curtice to Dr. Frothingham, who stated that he found the micro-organism of "Texas fever."

A portion of the heart, liver, spleen, kidney and the entire bladder were sent to Dr. V. A. Moore, bacteriologist, New York State Veterinary College, for examination. He also stated that he found the micro-organism of "Texas fever."

Prior to holding post-mortem, we examined the skin, and, after close inspection, discovered a single female tick—*Boophilus bovis*—about two weeks old.

In company with Dr. Curtice, I visited Watertown and Little Falls, where the Smith cattle were purchased. On our way to Watertown we stopped at Vermillion, for the purpose of investigating the disease "bloody murrain" or "red water," on the farm of F. D. Keller, reported by W. H. Belchamber, in his letter of August 28th. "Bloody murrain" or "red water" is sometimes called "Texas fever," as diagnosed by Dr. Walles.

On arrival we were informed that the animal was raised on the place, had never been off of it, and had been sick about six weeks; also that none but native cattle had been on the place or in the vicinity for several years. We informed Mr. Keller that his cow was suffering from some other disease.

While in Watertown we called on Dr. John R. Bell, United States Government inspector, who informed us that there had been no contagious or infectious disease of any description among the cattle in that locality, and that no cattle of any kind had been shipped into or through Watertown for any purpose, excepting Canadian cows, via Cape Vincent, en route to eastern points. He stated that the farmers raised all their cows, and exported instead of imported.

While at Little Falls, we called on Dr. H. Rowe, who stated that there had been no contagious or infectious disease among the cattle in that locality, which in any way resembled "Texas Fever."

In company with Dr. Rowe, we called on Mr. Wm. Cotter, of whom nine head of Smith's first carload were purchased. Mr. Cotter informed us that there had been no disease among the cattle on his place or on the farm where the cows were purchased, and that no Chicago or Buffalo cattle had been on the place.

We also went to Mr. A. L. Eaton's farm, situated about three miles from Little Falls, from whom six of Smith's first carload were purchased. Mr. Eaton informed us that there had been no disease among his cattle, nor any (that he knew of) among the herd from which his came or others that he sold, except Smith's.

About three months prior to our visit, he bought some cows at Buffalo, and on arrival at his farm they were put in the field with his other cows. Some of these were sold to Smith. These could not have been southern or quarantined cattle, or they would not have been infected and they would have infected the pasture and others would have succumbed to the disease. At the time of our visit, there were about 75 cows in the pasture and they had been there for months. All were apparently well. It is not probable that these animals were infected in the car, as we have positive evidence that yards 14, 15, 16 and 17, Alley D. were infected. It is not due to therailroad companies, however, that the cows were not infected in the cars, as I have been informed that when quarantined cattle are unloaded at West Albany, the cars are not disinfected. It is said that they are returned to Buffalo to be disinfected.

I am also informed that when quarantined cattle are unloaded at Kenwood, the cars are not always disinfected, as you will observe by copy of letter given below:

DELAWARE & HUDSON CANAL COMPANY,
NORTHERN RAILROAD DEPARTMENT,
CHURCH STREET STATION,
ALBANY, N. Y., *November* 19, 1897.
A. T. BENJAMIN, *Agent.*

DR. WM. HENRY KELLY, 195 *Western Avenue, City.*

DEAR SIR.—I have your favor of the 18th. The cars mentioned were not disinfected here for the simple reason that we had no notice from any source that they required disinfecting.

In the past we have received either a notice from the inspector at Chicago or some junction point agent, advising us that such a car must be disinfected.

There have been cases where these notices reached us some days after the car had been received, unloaded and returned light to the western road.

There seems to be a lack of system in handling this matter. If the western inspector would furnish the agent at the point where the inspection is made with the proper printed certificate which we usually receive, it could be attached to the way bill, then when the car reached destination the agent would know in every case that the car required disinfecting. As it is, we don't know until too late.

Respectfully,
(Signed) A. T. BENJAMIN,
Agent.

The following are the cars with their numbers, route over which shipped and party to whom consigned, referred to in the above letter:

Car, L. L. S., No. 337, August 27th, over D., L. & W. R. R., Con. L. Newhoff.

Car, Streets, No. 2125, September 4th, over D., L. & W. R. R., Con., L. Newhoff.

Car, Streets, No. 484, September 11th, over D., L. & W. R. R., Con., L. Newhoff.

Car, L. L. S., No. 241, September 16th, over D., L. & W. R. R., Con., L. Newhoff.

Other car loads of cows have been fed and watered in West Albany prior to August 1st, and later. They were not infected. The only ones that were infected were those that were in Alley D., yards 14, 15, 16 and 17.

As the Odell and Smith cattle were purchased in different parts of the State, the only place where they were kept in the same conditions was at West Albany, where they were fed and watered.

Knowing that four car loads of quarantined calves had been unloaded, fed, watered and rested in West Albany, and put into yards 14, 15, 16 and 17, Alley D, afterwards finding the ticks on the cow; the finding of the micro-organism in the blood of the cow belonging to the Little Sisters of the Poor, which died of "Texas fever," by Drs. Frothingham and Moore; also the presence of ticks on the colts and horses permitted to pasture in these yards—is positive evidence that these yards were infected.

It is a very important question how to prevent any similar outbreak in the future.

The way in which quarantined cattle are handled in this State is certainly very careless.

While at West Albany I was informed that at one time there was a chute in which they unloaded quarantined cattle. Some of the older men thought it useless, and becoming old and dilapidated it was disposed of.

The only place in Albany where there is a separate chute is in the D. & H. yards. Here the cattle are unloaded directly into the slaughter-house. No other cattle are unloaded at this chute but slaughter cattle.

While it is supposed that each car carrying quarantined cattle should have a placard attached to the outside, stating the nature of the cattle, these cards are often put on in a careless way, and before the car reaches its destination the notice has been torn or blown off.

It has certainly injured the cattle industry of this State to a large degree, and if I am correctly informed, the only reason why these quarantined calves were unloaded and held at West Albany for four or five days was due to the lull in the market, and to await higher prices, thereby bettering the owner's pocket.

The heavy losses in cattle, due to "Texas fever," have been great. The United States government has issued regulations governing the same, as you will see by the following:

REGULATIONS CONCERNING CATTLE TRANSPORTATION.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C., *January 27*, 1897.

To the Managers and Agents of Railroads and Transportation Companies of the United States, Stockmen and Others:

In accordance with section 7 of the act of Congress, approved May 29, 1884, entitled "An act for the establishment of a Bureau of Animal Industry, to prevent the exportation of diseased cattle, and to provide means for the suppression and extirpation of pleuro-pneumonia and other contagious diseases among domestic animals," and of the act of Congress, which became a law April 24, 1896, making appropriation for the Department of Agriculture for the fiscal year ending June 30, 1897, you are hereby notified that a contagious and infectious disease known as splenetic, or Southern fever, exists among cattle in the following described area:

All that country lying south, or below a line beginning at the northwest corner of the State of California; thence east, south and southeasterly along the boundary line of said State of California to the southeastern corner of said State; thence southerly along the western boundary line of Arizona to the southwest corner of Arizona; thence along the southern boundary lines of Arizona and New Mexico to the southeastern corner of New Mexico; thence northerly along the eastern boundary of New Mexico to the southern line of the State of Colorado; thence along the southern boundary lines of Colorado and Kansas to the southwestern corner of Kansas; thence southerly along the western boundary line of Missouri to the southwestern corner of Missouri; thence easterly along the southern boundary line of Missouri to the Mississippi river; thence northerly along the Mississippi river to the northern boundary line of Tennessee, at the northwest corner of Lake County; thence easterly along said northern boundary line to the northeast corner of Henry county; thence in a northerly direction along the boundary of Tennessee river to the northwest corner of Stewart county; thence in an easterly direction along the northern boundary of Tennessee to the western boundary line of Virginia to the northernmost point the southwestern corner of Virginia; thence northeasterly along of Virginia; thence southerly along said boundary line to the northeast corner of Virginia, where it joins the southeastern corner of Maryland at the Atlantic ocean.

Whenever any State or Territory located above or below said quarantine line, as above designated, shall duly establish a different quarantine line, and obtain the necessary legislation to enforce said last-mentioned line strictly and completely within the boundaries of said State or Territory, and said last above-mentioned line and the measures taken to enforce it are satisfactory to the Secretary of Agriculture, he may, by a special order, temporarily adopt said State or Territorial line.

Said adoption will apply only to that portion of said line specified and may cease at any time the secretary may deem it best for the interest involved, and in no instance shall said modification exist longer than the period specified in said special order; and at the expiration for such time said quarantine line shall revert without further order to the line first above described.

Whenever any State or Territory shall establish a quarantine line for above purposes, differently located from the above-described line, and shall obtain by legislation the necessary laws to enforce same completely and strictly, and shall desire a modification of the Federal quarantine line to agree with such State or Territorial line, the proper authorities of such State or Territory shall forward to the Secretary of Agriculture a true map or description of such line and a copy of the laws for enforcement of same, duly authenticated and certified.

Such States or Territories as now have a line established as last above mentioned can immediately forward certified copies of said line and laws for the enforcement thereof, and if satisfactory to the Secretary of Agriculture, the same may be adopted at once and the Federal line so modified.

From the 15th day of February to the 15th day of November, inclusive, during each year, no cattle are to be transported from said area south or below said Federal quarantine line above described to any portion of the United States above, northeast, or west of the above-described line except by rail for immediate slaughter, and when so transported the following regulations must be observed:

1. When any cattle in course of transportation from said area are unloaded above, northeast, or west of this line to be fed or watered, the places where said cattle are to be fed or watered shall be set apart and no other cattle shall be admitted thereto.

2. On unloading said cattle at their points of destination, pens, sufficiently isolated, shall be set apart to receive them, and no other cattle shall be admitted to said pens; and the regulations relating to the movement of cattle from said area, prescribed by

the cattle sanitary officers of the State where unloaded, shall be carefully observed. The cars that have carried said stock shall be cleansed and disinfected as soon as possible, after unloading and before they are again used to transport, store, or shelter animals or merchandise.

3. All cars carrying cattle from said area shall bear placards stating that said cars contain Southern cattle, and each of the way-bills of said shipments shall have a note upon its face with a similar statement. Whenever any cattle have come from said area and shall be reshipped from any point at which they have been unloaded to other points of destination, the cars carrying said animals shall bear similar placards with like statements, and the way-bills be so stamped. At whatever point these cattle are unloaded they must be placed in separate pens, to which no other cattle shall be admitted.

4. The cars and boats used to transport such animals, the chutes, alleyways, and pens used during transportation, and at points of destination, shall be disinfected in the following manner:

(A) Remove all litter and manure. This litter and manure may be disinfected by mixing it with lime or saturating it with a 5 per cent. solution of carbolic acid; or, if not disinfected, it may be stored where no cattle can come into contact with it until after November 15th.

(B) Wash the cars and the feeding and watering troughs with water until clean.

(C) Saturate the walls and floors of the cars, and fencing, troughs and chutes of the pens with a solution made by dissolving four ounces of chloride of lime to each gallon of water. Or disinfect the cars with a jet of steam under a pressure of not less than fifty pounds to the square inch.

Cattle from the Republic of Mexico may be admitted into the United States to remain below said Federal quarantine line after inspection, according to law, but said cattle shall not be permitted to cross said quarantine line otherwise than by rail, for immediate slaughter, except by special permit from the inspectors of the Bureau of Animal Industry, issued according to the regulations of the said bureau, and no permit shall be issued except for cattle free from splenetic or Texas fever, or from contact therewith during the three months preceding the issuance of said permit, and which have been grazed in a locality free from infection of such fever.

Notice is hereby given that cattle affected with the *Boophilus bovis* or Southern cattle tick, disseminate the contagion of splenetic or Southern fever (Texas fever); therefore cattle originating outside of the district described by this order, or amendments thereof; and which are infested with the *Boophilus bovis* ticks shall be considered as infectious cattle and shall be subject to the rules and regulations governing the movement of Southern cattle.

Stockyards companies receiving such cattle shall place the same in the pens set aside for the use of Southern cattle, and transportation companies are required to clean and disinfect all cars and vessels which have contained the same, according to the requirements of this department.

The losses which formerly occurred to the owners of susceptible cattle, both in the interstate and export trade, by the contraction of this disease from exposure in unclean and infected cars and pens, and by means of the manure carried in unclean cars from place to place, became a matter of grave and serious concern to the cattle industry of the United States, until this danger was removed by the inspection of this department. It is absolutely essential, therefore, that this cattle industry should continue to be protected as far as possible by separating the dangerous cattle and by the adoption of efficient methods of disinfection.

Inspectors are instructed to see that disinfection is properly done, and it is expected that transportation and stockyards companies will promptly put into operation the above methods.

All prior orders conflicting herewith are hereby revoked.

J. STERLING MORTON,
Secretary.

If this law is strictly adhered to, it is not probable that we shall have any future outbreaks.

I would suggest that you call the attention of the Federal government to the slack manner in which these quarantined cattle are handled and request them in the future to notify you of all shipments of quarantined cattle through or into this State, giving source, and destination and car number, so that you will be able to keep track of them and see that they reach their destination and not be sold before, especially where they have no proper place to unload them.

After being satisfied that the cattle were infected at West Albany, Alley D, and yards adjoining were put under quarantine. The gates at each end of the alley were locked and no cattle were permitted into this alley or yard adjoining until we had several frosts. This was done October 7th, and was not raised until December 1st. It was not until after the lapse of several weeks before it was definitely decided that the yards at West Albany were infected. This was due to misleading reports which we received. While we felt confident that such was the case, yet we could not say positively during this time that all the cattle that passed through those yards were exposed on account of the law which reads as follows:

Sec. 62. Farms to be quarantined. The commissioner or an assistant commissioner shall order any premises, farm or farms where such disease exists, or recently existed, to be put in quarantine, so that no domestic animal be removed from or brought to the premises or places quarantined, and shall prescribe such regulations as he may judge necessary or expedient to prevent the communication of the disease by infection or contagion, in any way, from the places so quarantined.

By this you will see you could only quarantine where a contagious or infectious disease existed, or recently existed. It seems that the law in reference to quarantine premises ought to be amended so that the commissioner would have the authority to quarantine a place on suspicion, and not wait until he had absolute proof. As stated before we were unable to get *positive* proof of the yards being infected for several weeks, although every effort was put forth to obtain it. During this time all cattle that passed through West Albany were liable to be infected.

II. Rabies near Saratoga.

According to instructions, I went to the farm of Mr. John Donnan, Greenfield, Saratoga county, on June 22d, to examine some cows supposed to be affected with rabies.

On inquiry, I was informed that about May 12th a shepherd dog, owned by Geo. W. Hart for about three years, seemed to act strangely by biting anything that came in his way.

Mr. Hart, who had been a neighbor to Mr. Donnan for about two years, moved some three miles from this locality some time before my visit.

The dog, on the above-named date, returned to his former home and bit at the door, trying to gain admittance. The occupants of the house did not admit him, and he went to a neighbor's, Mr. Reuben Dean, and bit a fifteen-months-old Jersey heifer on the outside of the hind leg, near the stifle joint. The dog then attempted to attack Mr. Dean, who drove him off with a club.

From Mr. Dean's he proceeded to visit adjoining farms. During his travels he bit several dogs, all which were killed with the exception of a dog owned by J. Daniels.

Early on the morning of the 13th he bit a son of Mr. Hart and started away from home. While on the road he met Mr. J. Donnan, who thought the dog appeared to act strangely, but having always been very friendly toward him, and not having heard of his strange actions and bitings, he did not attempt to get out of his way, whereupon the dog sprang at Mr. Donnan, caught him by the left wrist and severely lacerated it. Mr. Donnan grabbed the animal by the throat, and, after a hard struggle, choked the dog and finally freed himself.

The animal then went to Mr. Donnan's barnyard, grabbed a two-year-old grade Jersey heifer by the ear, destroying about one-half of the member. He then attacked a three-year-old grade Jersey heifer, bit it on the inside of the right hind leg and severely lacerated the mammary gland.

He then proceeded to the village of Saratoga Springs.

Mr. Hart, upon hearing of the suspicious actions of his dog, started out with his horse and wagon and succeeded in overtaking him in the village of Saratoga. In trying to capture the dog Mr. Hart was bitten. He put the dog in his wagon, and, after reaching home, killed him.

The first of the animals bitten which showed any strange symptoms was the heifer belonging to Mr. Donnan, which was injured in the mammary glands. The animal, when first noticed to act suspiciously, would break down fences, bellow and paw the ground. Mr. Donnan immediately took her to the barn and had her tied. She refused to eat or drink, and upon the approach of a person or dog would attempt to attack them. Generally she was very excitable. She gradually grew weaker until she was unable to rise, and upon the day of investigation was found to be in such a helpless condition it was deemed best to slaughter her for examination. Upon post-mortem she showed some messenteric tuberculosis. The brain and a portion of the spinal cord were sent to Prof. V. A. Moore for diagnosis. Through some delay in expressage it did not reach Prof. Moore until decomposition had taken place.

The next animal that showed any symptoms of rabies was the heifer owned by Reuben Dean. She was noticed to act strangely about July 2d. The symptoms were the same as described in the preceding case. Upon being let out of doors she would butt against the trees, bellow, paw the ground and chased a dog which was thrown into the lot. This animal died on the 5th day of July in convulsions.

As the disease appeared to be rabies, it was very important that a diagnosis should be positively made. As it is necessary, to do this, to make animal inoculations with pieces of the brain or spinal cord of the suspected animal, these organs were sent, under special precautions, to Prof. V. A. Moore of the N. Y. State Veterinary College. He made the necessary inoculations into two rabbits, which died of paralytic rabies on the 22d and 24th, respectively. This furnished the necessary evidence to establish our original diagnosis of rabies.

On the 16th day of May Mr. Donnan left for the Pasteur Institute, in New York city, where he underwent a sixteen-day treatment for rabies.

Mr. Hart was taken sick on July 19th and died July 22d. The physician who attended him said that Mr. Hart had been taken ill on Monday. Medical advice was not called until Wednesday, as Mr. Hart had previously been troubled with catarrh of the stomach, and the family did not regard the symptoms as anything alarming. It is probable that council would not have been called then, but Mr. Hart, recalling having been bitten by the dog, feared that he might have rabies. However, he gradually grew worse, being affected with spasms of the glottis, and died about 8 a. m. on the following morning.

Mr. Donnan, who took the Pasteur preventive treatment, has remained well.

Up to the time of writing this no other cases have developed.

Rabies at Chatham.

According to instructions, I accompanied Prof. V. A. Moore of the New York State Veterinary College, on the 12th of September to Chatham, N. Y., for the purpose of investigating an outbreak, reported to be rabies. On our arrival we were met by Dr. H. B. Ambler.

On inquiry, we found the history of the outbreak, to be briefly stated, as follows:

August 15th a bull dog, belonging to Ed. Rifenburg, a dachshund, belonging to Mrs. Hurd, and a fox terrier, owned by J. Mickle) these owners being residents of the village of Chatham), were bitten by a large black dog. No one seemed to know whence he came or where he went.

This black dog bit all the animals above mentioned in the nose, and it is said that he jumped at a horse, while being driven along the street, and tried to grab him by the nose, but was unsuccessful.

August 30th the bull dog was said to have vomited and refused food. On the 31st, it took food apparently with a relish, but the following day refused food or water and died on September 3d. The symptoms were paralysis of the hind limbs and jaw; tongue swollen and protruding.

September 6th the dachshund was taken sick, and appeared to have abdominal pain, and refused food. It was treated by Dr. Ambler for enteritis. It appears to have recovered, wound healed and is in good health.

September 2d, the fox terrier was taken sick. The symptoms were paralysis of the hind limbs and tongue; tongue swollen; dog made a peculiar whining sound, and after three days' illness was killed.

On the 16th of September the black dog was seen running through the streets aimlessly and acting strangely; head drooping and tail hanging. On same date it was seen lying as if in a dying condition in an old mill dam. The neighbors threw stones at him, and, after a severe struggle, he gained his feet and dragged himself into the surrounding brush, where they thought he would die.

This same day it was thought he bit a dog, which was post-mortemed by Prof. Moore and myself, and the brain and spinal cord were taken for examination. The brain was slightly conjested. No other lesions.

August 17th this same animal bit a dog belonging to Fred Woods, some cows owned by Mr. William Hartigan and a St. Bernard pup (six months), belonging to W. H. Barrett.

While on the farm of Fred Woods, which is about three and one-half miles from Chatham, he fought with Mr. Wood's dog and lacerated him severely. He then went to the adjoining farm, owned by William Hartigan, and was seen in his dooryard snapping and snarling at his dog. He was covered with blood, probably the result of the encounter with Woods' dog.

He went into the pasture with the cows. He was seen to chase them and the cows chased him in retaliation. Two of the cows have died since, and one was sick at time of investigation. Dr. H. B. Ambler post-mortemed one of the cows and removed the brain and spinal cord, which were given Prof. Moore for examination.

The symptoms of the cows were loss of appetite, restlessness, bellowing, in heat, chasing the other cows, unable to eat, tongue swollen and persistent constipation.

The first one taken sick bit at objects and had a staggering gait; would hook the stone wall with its horns, or any object; also had considerable salivation; persistent gaping and yawning; temperature slightly elevated. Both died four days after the first symptoms were noticed. The cows were post-mortemed and there were no lesions found.

The only thing that seemed abnormal was the impaction of the third stomach.

At time of investigation there was a dog put into the lot where the affected cow was, and she immediately started after it, bellowing, but owing to partial paralysis of the hind limbs, was unable to run far.

The wounds of the St. Bernard pup were treated and healed. The owner, hearing of the strange actions of the black dog, and fearing that his might be affected with rabies, tied him. On the 7th and 8th inst. he appeared to act strangely—whining, jumping and snapped at Mr. Barrett's infant's clothes and tore them. Mr. Barrett thought that these actions were quite unusual, as he was habitually very friendly with the child, and concluded that the conditions were due to the dog having been tied, as he was unaccustomed to it.

While untying the dog, the animal jumped at Mr. Barrett, tore his shirt sleeve and severely lacerated his arm. When the dog gained his freedom, he started at full speed, and nothing was heard of him until September 13th, although Mr. Barrett advertised largely, as the dog was a pet of the family and they were anxious for his return.

On the 13th inst. he was found thirty miles from home, at Garfield, in a paralyzed condition. The finder thought he corresponded to the advertisement, and wrote Mr. Barrett of his discovery and the dog's helpless condition.

In the meantime the finder tried to give the animal milk and food, but the dog was unable to swallow, and died on the 14th.

Prof. Moore informed me that he made the necessary inoculations into two rabbits, and that they died of paralytic rabies, in the usual time.

It is probable that the other animals also died of rabies.

Rheumatism of Cattle.

May 30th, I went to Sardinia to examine a herd of cows belonging to Mr. J. Upon inquiry we were informed that about five weeks prior to our visit one animal was noticed to be ailing. The symptoms were stiffness of gait; arched back; animal disinclined to move; would eat old pieces of board or leather in preference to wholesome food. Other cows were gradually affected and at the time of our visit there were eight sick, none having died.

The local veterinarians pronounced it a case of influenza, and, according to their suggestions, the animals had been treated with tincture of aconite.

The animals were fed on gluten and feed from a silo.

According to the history of the case and symptoms, the animals seemed to be affected with acute rheumatism. I suggested a course of treatment for this disease. Since my visit I have received a letter from the owner, stating that all the animals had improved excepting two, which appeared to have it in a chronic form.

January 15th, in company with Inspector Quigley, we visited a herd of swine at Lacona, which were reported to be suffering from a contagious disease. At the beginning of the disease there were ten shoats and one old sow. The hogs were kept in filthy surroundings, in a poorly constructed shed, which did not protect them from the weather. The owner stated that he threw the horse manure into the pens for them to eat, and make their nest in to keep them warm. They were fed on garbage from the house, soft corn, potatoes and wheat bran.

We were informed that about three weeks prior to our visit it was noticed that one of the shoats was unable to come to the trough to eat with the others on account of its inability to use its hind limbs. In the course of a few hours it died. A few days later another pig was taken; this recovered in a few hours. After the lapse of a couple of days another was noticed to exhibit the same symptoms as the first one. This one recovered. He sold one of the shoats to his uncle; the shoat was taken sick two weeks after purchasing and died in a few days. Symptoms were similar to those of the first one that died.

At the time of our visit there was a shoat apparently in the last stages of the disease. The owner consented to have it killed for the purpose of holding a post-mortem examination. This was done, but the lesions were not typical of any infectious or contagious disease. Specimens of the organ were sent to the New York State Veterinary College, for bacteriological examination. Dr. Moore reported that he found only germs of putrefaction.

We also visited a herd of hogs at Scriba, which were reported to be suffering from "swine plague." The owner informed us that he had twenty-two shoats. They were kept in clean pens and were fed crushed corn meal, wheat middlings and gluten. About January 1st, one shoat was noticed sick, and died on the 8th. Its symptoms were, that it was unable to come to the trough to eat on account of paralysis of the hind limbs. The 12th, another was noticed sick, and died on the 13th; symptoms similar to the other. After the loss of these he consulted Dr. M. M. Poucher, who prescribed for the hogs, and at the time of our visit all appeared to be well. I requested, that if there were any more deaths they be immediately reported.

During March, Dr. H. B. Ambler and myself visited a herd of swine at Kinderhook, which were reported to be suffering from hog cholera. We made several post-mortem examinations, but none of the lesions were typical of hog cholera.

Diseases of Swine.

December 27, 1896, I was informed by Mr. Rand, superintendent of the West Albany stock yards, that thirty-six shoats belonging to the company were supposed to be suffering from a contagious disease. One died on the 25th, three were killed on the following day, apparently in the last stage of the disease, two were sick at the time of investigation.

The animals were fed on garbage from some of the hotels of this city; also wheat bran and corn meal, a portion of which was divided into four pens. The pens were cleaned daily. About nine shoats were kept in each apartment.

While making the investigation, D. B. Comstock, D. V. S., of this city, was passing, and Mr. Rand called him in for consultation. When he learned that a number had died and that the ears and the skin over the abdomen turned red and purple, he immediately diagnosed it hog cholera, and stated that all treatment was useless. He recommended Mr. Rand to kill all immediately. I made a post-mortem on one that died, but failed to find typical lesions of hog cholera, and sent specimens of the organs to Prof. V. A. Moore, for bacteriological examination. I informed Mr. Rand that I did not think it was hog cholera, and recommended change of food, separation of the sick from the well until I heard from Prof. Moore. Acting under Dr. Comstock's advice, the hogs were all slaughtered the next day and sold for pork. Prof. Moore reported that he failed to find either the bacillus of hog cholera or swine plague in the specimens.

Very respectfully,

WM. HENRY KELLY, V. S.

REPORT OF H. B. AMBLER.

Hon. C. A. Wieting, *Commissioner of Agriculture, Albany, N. Y.:*

Dear Sir.—On September 22d, I visited the farm occupied by Wm. A. Bartlett, near Vermilion, Oswego county, N. Y., to investigate the cause of "Swine dying with some disease" as reported by his telegram.

I found his herd of hogs numbered twenty-six, kept in three different pens—four sows and six pigs two weeks old in one pen, eight pigs ten weeks old in another part of the same building and eight pigs fourteen weeks old in a pen in the orchard. This arrangement was new and the pens were new and clean. The four old sows and the six pigs were in the habit of being penned up; the others were allowed the liberty of the barnyard, dooryard, orchard, etc.

On September 12th, Mr. Bartlett found one of his ten weeks old pigs dead and thought it must have choked to death. The same day he noticed one of his fourteen weeks old pigs had pimples and was scratching himself behind the ears and shoulder, and later on all over; the next day two or more of the same lot were affected in the same way. The sores on the fourteen weeks old pig spoken of were scabbed over with grayish brown scabs, which gave the appearance of having been dusted with guano. Finally all the pigs got in the same condition, lost flesh, the skin grew stiff and wrinkled but they did not lose their appetites. They kept up an incessant scratching and rubbed off loose bristles and scabs which kept forming. About this time the ten-weeks-old lot got the same complaint and one of the "runt" spent so much time scratching that he did not get up to the trough in time to get much to eat, consequently he grew very weak and was destroyed. It was at this time Mr. Bartlett sent his telegram, more to get advice as to what to do to prevent its spread than to have any one visit his herd, as he did not think it anything more than skin disease. I found all the fourteen-weeks-old lot and most of the ten-weeks-old lot more or less affected, but the old hogs and young pigs that had been kept in a pen all the time were O. K.

Mr. Bartlett raised all his pigs; never bought any; nor did he ever have disease among his hogs before.

On inquiry I found that Mr. Bartlett's dog had had the mange more or less the last five or six years, and that the dog was used to chase the pigs from the back door, out of the garden, etc. I concluded that the trouble with the pigs was mange and that they had caught it from the dog.

I advised treatment accordingly.

In accordance with your telegraph order to investigate the reported disease of cows at George C. Mead's, Flat Brook, N. Y., I went there on September 20th. Mr. Mead's herd at present consists of four cows and one heifer all O. K. The cattle that had died were yearlings, grade Jersey, that were pastured on a hill side, with running water one mile from home, but in sight of the house. They were three heifers and one bull. On September 5th, one heifer was noticed down; discharge of blood from nose and rectum; frothing at mouth; straining, groaning and died before anything could be done for her. The others were taken home; kept isolated from the milch cows in a barnyard by themselves. That night another heifer was taken sick very much the same as the other, panted, groaned, frothed at mouth, straining frequently and passing clotted blood from rectum, also some bloody discharge from nose and eyes and died twenty-four hours after the first symptoms appeared. It was a noticeable fact that neither of these heifers bloated after death. The following morning the bull was taken sick with similar symptoms and a veterinarian from Pittsfield, Mass., was called, and he pronounced the bull in a dying condition. The bull was destroyed and an autopsy held. The lesions found were those of some irritant poison and I learned from some of the neighbors that poison had frequently been put out for dogs, foxes, etc. It is quite possible that these cattle had found and ate some of it. The remaining heifer was all right, in perfect health and had not been sick; so were the milch cows that were kept in a different pasture.

Mr. James Finney, who lives in the town of Canaan, N. Y., reported that he had lost two horses this past season with what he supposed to be "distemper," but that he now had two more exhibiting similar symptoms, with no sign of improvement, so he feared the malady might be something contagious, and if so, that he desired to know what to do to prevent its spread. Accordingly, I visited the place October 20th, and found that the horses that had died were used on a cream route and were sick for several weeks; they had a cough, discharge from nostrils, enlarged glands, grew thin and finally got so weak that they could not be worked any more; one of them broke out in sores on one extremity before he died. The horses sick now were gray geldings, four and six years old, respectively, and were kept in the stalls where the other sick ones had been and were used in the same harness, for a similar purpose; they were very much emaciated, had been sick about six or seven weeks, had a cough, discharged from right nostril, enlarged indurated glands between jaws, that were adhered to the jaw bone, and very suspicious looking ulcers on the nasal mucous membrane. These horses were both being used almost daily, and while they always ate their grain, they were so weak that they had to be whipped along. Being suspicious that the trouble was glanders, I applied the Malleine test, injecting them the evening of October 23d; the next day they gave the splendid reaction of from 100 1-5 F. to 104 3-5 F. in one case, and from 100 3-5 F. to 105 1-2 F. in the other, which confirmed my suspicions as to the nature of the disease. Mr. Finney had three other horses that he kept in the stable, but they showed no external signs of being affected. I reported the matter to the local board of health, who took immediate action, and after the horses were appraised, they were destroyed; stables, etc., were disinfected as per direction of local board of health.

As per your instructions I herewith send you a history of the outbreak of rabies that occurred in and about the village of Chatham, N. Y., during a part of August and September of this year.

I have made diligent search in this matter in order to get at the absolute facts in the history of the "original" rabid dog, and his ravages, which was ascertained after I was called to see the cow at Mr. William Hartigan's, on September 16th.

On August 15th there appeared in this village a strange dog, that was noticeable for his size and markings, as well as his actions. He was a large black and white curly-haired dog, with a white breast and tip on his tail. He ran around rather aimlessly, and at times seemed not to have good control of his hind quarters. He was first noticed on the first day of his visit here trying to bite a brood mare that was pasturing in a barn lot in the lower part of the village; this same afternoon he visited the premises of Mrs. Emily Hurd, and without any ceremony bit a valuable dachshund that was playing in the door-yard; thence he went to John Mickle's, and bit a fox terrier in just as short order; then made quick steps for Edward Rifenburgh's, when his bull dog stuck his nose through the fence just for sociability and received a bite on that organ. Later on he visited the premises of W. H. Barrett, and got into a fight with his St. Bernard; then he strolled about two miles southeast of this village and was seen jumping at the head of a brood mare belonging to James Doyle, Jr., and it was noticed that he had bit her severely on the head and fore quarters. The next morning, August 16th, he was seen in the road and in the lots near the residences of Henry C. Pierson and John Quirk, about one and one-half miles still farther on; that noon he was back here in the village and chased my dog, an English setter bitch, into my carriage house and bit her. A witness to this act remarked that that must be a fool of a dog that would bite a bitch. Then he visited the premises of Elmer Hunt and bit his little dog that was tied in the yard; then he came back in the vicinity of Central square and was noticed to act strangely, first running in one direction, then in another, with no apparent reason; then all of a sudden he gave a peculiar howl, and with his head high in the air and his tail between his legs, he ran up River street, and went into the house occupied by Benj. Wilson and crouched under the table; from there he was driven out with considerable difficulty, and several flat irons; while making his exit he started for the cat, which evaded him by climbing up a tree; but he continued his trip around the house and met a bull pup, which was tied there; he bit the pup severely; then was not heard of until the next day, when he was seen early at Mr. C. Wood's, on Spring street, where he had a fight with his shepherd dog. He was seen several times still farther out on this road, but did no damage until he got to Frederick Wood's, about three miles distant, where he was noticed lying beside the road, and when Mr. Wood's black and tan came out of the yard he rushed up and bit him; then he went to the next house, where Wm. Hartigan lives, and snapped and snarled at his dog; then he went off in the lot where Hartigan's cows were pasturing, and he was noticed to be snarling and biting at the cows, which in turn were chasing and bellowing at him. After this I have not heard of his doing any more damage, and it is safe to presume that he was overtaken by paralysis and died.

On August 31st, E. Rifenburgh's bull dog was taken sick; refused to eat, appeared to have trouble with his throat, salivated, jaw dropped and in a few days became paralyzed and died; was thought by owner to have been poisoned.

September 1st, John Mickle's fox terrier became sick; had trouble with his throat, salivated, jaw dropped, became paralyzed, and was thought to be dying of poison, so was chloroformed. September 5th, a grade cow belonging to J. Quirk became sick and died in three days, as owner supposed, from being crazy. The symptoms developed in this cow were, according to Mr. Quirk's statements, identical to those exhibited by cows known to have rabies; so it is safe to presume that this cow was bitten by the original black-and-white shaggy dog, when he was seen in that locality on August 16th. September 8th, W. H. Barrett's St. Bernard was noticed to act strangely; refused to eat, so was loosened from his chain, and he immediately ran away and was not heard from in four days, when he was found paralyzed in a road near Garfield, N. Y., a distance of thirty miles from home; he died the next morning.

September 10th, Wm. Hartigan had a cow taken sick; she became furious and had to be isolated, and died in three days of paralysis. An autopsy held by owner revealed an impact third stomach, and nothing special was thought of it until September 13th, when another cow was taken suddenly sick the same way, stopped eating, salivated, yawned, bellowed, chased the other cows, acted as if in heat, a very wild expression to her eye, constipated, milk secretion completely dried up; she had an old abrasion on her nose that had not healed; when given water she would make ineffectual efforts to drink; she showed great aversion to dogs, pigs, chickens, etc., but showed no disposition to hurt her attendant; her eyes were abnormally bright; she seemed to be anxious about something; in fact, her demeanor was such that a person would keep his eyes on her so long as there was opportunity for her to make an assault. This cow's condition remained about the same for two or three days; her bellowing became more weak, her voice more hoarse, and her bowels obstinately constipated. The owner being very anxious to do something for these symptoms, administered such remedies as he thought proper, and once in doing so the cow fell down and broke her horns off. Mr. Hartigan immediately turned his attention to stopping the hemorrhage, and in doing so scratched the back of his hand on the rough bleeding edge of the horn. After the hemorrhage was stopped he continued administering medicines from time to time—getting the abrasion on his hand covered with saliva from the cow's mouth—until September 16th, when she died.

It was at this time that I was advised of the facts in the case, and made a diagnosis of rabies, and by the advice of Mr. Hartigan's physician, he (Hartigan) went to the New York Pasteur Institute the next day (September 17th) and took their preventive treatment for hydrophobia, which lasted over two weeks. Before Mr. Hartigan started for New York, I held a post-mortem on his cow, and sent one-half of the brain to the New York Pasteur Institute and the other half was saved in glycerine for Prof. V. A. Moore, of Cornell University, for experimental research.

On this same date I reported this outbreak to your Department, and Prof. V. A. Moore was ordered to the scene to collect additional material for experimental inoculations.

September 17th, I was called to see a young dog belonging to Benj. Wilson, that had acted strangely for several days, ran away from home, salivated, had trouble with his throat, could not swallow liquids, jaw was dropped, showed sexual excitement. I made a diagnosis of dumb rabies and had him removed to my hospital for observation.

The night previous to this, the third cow in Mr. Hartigan's herd was taken ill similar to the others, but the symptoms were not so aggravated.

September 18th, Prof. Moore, accompanied by Dr. W. H. Kelly, arrived here just in time to see the dog belonging to Benj. Wilson die in a paralytic stage. He had been completely paralyzed for eight or ten hours. Prof. Moore held a post-mortem on the dog and took the brain for inoculating material. We visited Mr. Hartigan's farm and saw the affected cow and decided that we would let her die a natural death; then I was to hold an autopsy and forward the brain to Prof. Moore. This cow bellowed a great deal, yawned, salivated, had an obstinate constipation, acted as if in heat but was four months pregnant, would not eat or drink, gave almost no milk, ears erect, seemed alert. She continued this way for several days, grew gradually weaker and would occasionally fall down when she attempted to bellow. Finally on September 22d, she got into a paralytic state and after a few convulsive efforts, died. Unfortunately I was out of town at the time and the cow was buried without any one holding a post-mortem.

During my absence from town J. Doyle, Jr.'s brood mare was taken sick, seemed uneasy, ran around lot a good deal and would not eat; later got down and would bite at the ground and on her fore quarters, and as the owner suspected that she had rabies, he destroyed her.

September 24th, I was called to Henry C. Pierson's to see a sick cow that would give no milk. History: Brown cow, nine years old, grade Jersey, nervous temperament, a deep milker, four months pregnant, had been pasturing in lot where original rabid dog was seen August 16th. The night previous this cow appeared O. K., but only gave a small quantity of milk, and that morning gave none at all; she was let out into the barn lot and would not eat, but bellowed and ran around, acted as if in heat, yawned considerably, saliva was dropping from her mouth, pawed some and strained a little, passing only a small quantity of feces with each effort.

The next day her condition was about the same, the straining had increased and she passed a little manure or urine each time; would attempt to drink but finding that she could not swallow, would get furious and hook at the pail. If a stick were pointed at her, she would grab hold of it with her teeth and hold on; she bellowed a great deal and the saliva ran a stream from each side of her mouth, her eyes were abnormally bright; would chase a cat or chicken if it came near her; would refuse clean stalks and grain but would eat dirty straw, pieces of paper, etc., that she found in the barnyard. When she was moved around she acted like a stakey horse; paid no attention to a crack with a whip; again she would go on the run. The third day of her sickness she grew weaker, bellowed less, but frequently fell down when attempting to do so, and finally got down to stay, bloated, saliva ran a stream from her mouth and her body became covered with flies, which would walk across her eye and not make her wink. She remained in this condition about four hours and with a short convulsive spell, died. I held an autopsy the next day and found the stomach in a normal condition, containing a few extraneous objects; intestines were normal; liver slightly yellow; spleen filled with dark blood and friable; heart filled with clotted blood; lungs all right; kidneys a trifle softer than natural. The brain appeared normal and was sent by express to Prof. Moore, of Cornell University, for experimental purposes.

September 18th, I notified the local board of health of the existence of rabies in and about the village, and they immediately issued the following:

NOTICE OF THREATENED EPIDEMIC.

To the Residents of the Village of Chatham, N. Y.:

Take Notice.—You are hereby notified of a threatened epidemic of hydrophobia in said village, and all owners of dogs are required to confine or muzzle such animals for a period of sixty (60) days from the date hereof. All dogs found running at large in any of the streets of the village will be captured or killed.

The poundmaster and police officers will enforce this order.

By order of the board of health.

Dated September 18, 1897.

W. B. DALEY,
Secretary of the Board of Health.

DR. EDGAR AMBLER, *Health Officer.*

In accordance with the directions of Assistant Commissioner H. S. Ambler, the owners of all dogs known to have been bitten by the "original" rabid dog were notified of the existing disease and they willingly in every case caused their dogs to be destroyed.

Prof. Moore's inoculations in rabbits with portions of the brain from the Hartigan cow, the Wilson dog and Pierson cow, confirmed my diagnosis of rabies in each instance, and inoculations at the New York Pasteur Institute with portions of the brain from the Hartigan cow in guinea pigs gave a similar result.

From the above facts it is proper to suppose that the dogs belonging to Barrett, Mickle, Rifenburgh and Hunt, as well as the cows of Hartigan and Quirk, and the horse belonging to Doyle were all affected with rabies.

As far as I can learn the dogs affected all had rabies in the dumb form, and that, as well as the prompt action of Assistant Commissioner Ambler with the co-operation of the local board of health and owners of dogs known to have been bitten by the original rabid dog, will account for the termination of the outbreak, and the non-appearance of a second crop of rabid animals.

Respectfully,

H. B. AMBLER, D. V. S.

Report on Sanitary and Bacteriological Work, for the Department of Agriculture.

By A. L. Haines, M. D.

Hon. Charles A. Wieting, *Commissioner of Agriculture:*

Dear Sir.—I have the honor to submit herewith the following report of the sanitary and bacteriological work performed by me in an inspection of the creameries, cheese and butter factories, milk shipping stations, butter and cheese packages, cans, refrigerators, cooling vats, cheese vats, sour milk vats, dairy products and dairy animals, including both surroundings and food supplies.

In pursuing this line of work, we recognize that there has been somewhat of a departure from the beaten lines of the Department in the past. The present management of this Department is appreciative of a feeling of sensitiveness on the part of the public, with regard to the purity and healthfulness of dairy food products, and in response to such feeling advanced ground has been taken, the needs of which and the results to be accomplished, we believe will in the near future justify the wisdom of the position taken. The impression prevails to a large extent that many of our dairy products are gotten and kept under conditions, which if not positively detrimental to health, are clearly unclean and unpalatable, and hence, in a manner to say the least, repugnant to the tastes, and better feelings of the consuming public. The conclusions arrived at after careful investigation of these conditions would seem to justify such impression. An idea may also be formed of the magnitude of the work attempted, when one stops to think of the varied subjects considered, the wide field to be covered and the extent of territory to be traversed.

That it is an important work we hope to prove, both from its very necessity, as well as from the standpoint of public taste and health.

The extent, too, of the consumption of our dairy products, as articles of food, especially of milk, New York city alone requiring a million quarts per day, would seem to justify a careful scrutiny of the methods of production, as well as subsequent care, in fact, everything that pertains to the industry, until these products are delivered into the hands of the consumer. As they admit of easy contamination, natural and fraudulent, honesty, as well as the preservation of public health, demands that these products be unadultered, clean, pure and wholesome. This the consumer has a right to expect and should always demand of those who produce these food products. Nothing else suffices, and nothing else should be accepted. It is a part, too, of the implied contract, the moral part between the producer and consumer of these products. By statute the State has also justly aimed to make it a part of the legal contract, for we read in Article II, section 20, of the Agricultural Law, that all persons are strictly prohibited from furnishing for public use all unclean, adulterated and unwholesome milk, or any product made from the same, and it gives as a reason for such prohibition that all such products shall be deemed *unhealthy* to the consumer. Now if this be true and capable of scientific or other demonstration, then there is a problem of health involved in the purity of our dairy products which we can ill afford to ignore, and such prohibition of law, therefore, rests upon a just and proper basis and should be strictly enforced. The law goes even further than to make a general prohibition, and specifically points out what should be regarded as unclean, adulterated and unwholesome, and therefore, forbidden, for we read, "The term adulterated milk when so used means: 'Milk drawn from animals fed on distillery waste or on any substance in a state of fermentation or putrefaction or on any unhealthy food.' 'Milk drawn from cows kept in a crowded or unhealthy condition; milk which has been diluted with water or any other fluid, or to which has been added or into which has been introduced any *foreign substance whatsoever*.'"

And of the manufactured products of such milk it further states: "No person shall sell or exchange, offer or expose for sale or exchange any unclean, impure, unhealthy, adulterated or unwholesome milk, or any cream from the same, or sell or exchange or offer or expose for sale or exchange any article of food made from such milk, or of or from cream from the same, or manufacture from any such milk or cream from the same, any article of food." There is, therefore, warrant in law as well as a necessity both from existing conditions and health requirements for the prosecution of this work.

The whole machinery of this Department in the past, ay, the strong arm of the law has been invoked to detect and punish those who added water to their milk, while others who produced theirs under conditions that were absolutely filthy, and who kept it so constantly exposed to the possibility, if not actual contamination, because of unsanitary surroundings and methods of handling, went unnoticed and unreproved. While we would not apologize for those who practice this fraud, or in any manner lessen the penalties attached to it, or in any way encourage its continuance, yet we are constrained to believe that the mere dilution of milk with a little water, so long as that water is free from disease germs, can be of little real harm to the consumer outside of his being compelled to pay for something which he expects but does not get, while receiving and paying for that which is abundantly free in nature without money and without price. While on the other hand, he who receives a milk or other dairy product containing filth or the germs of disease is injured not only in pocket, but in health as well. There is, therefore, something more than the mere question of fraud involved in this problem of the purity and cleanliness of our dairy products, viz., that of the public health.

While it might be said that the Agricultural Department is hardly to be entrusted with great and momentous questions of public health, yet the nature of this work is such that it more directly concerns this Department than any other. The intimate association of it with all our dairy interests necessarily makes it so. Again, this work can be more economically done by this Department than any other, for the reason that it is already upon the ground with a corps of inspectors and employees engaged in an effort to prevent dilution, and they naturally come to have cognizance of cases of apparent and real violation of sanitary laws as applied to the production and care of these products. But as the law now stands the head of this Department has no option. The statute makes it mandatory upon him that he assume the responsibility of this work and to prosecute it to the best of his ability. But whether delegated to this Department or some other, this work of necessity must be under State control; no mere local supervision will do. In many of the popular centers like our large cities our dairy food products are brought from a considerable distance, and much of unsanitary conditions and possible and real contamination originates with the producers and " middle men;" and it naturally follows that any supervision to be effective must commence at the very foundation source and be continuous until these products are actually placed in the hands of the consumer. Only a board having wide and general authority will be effective. This work as yet is largely in its inception, and just how it is best to prosecute it experience will demonstrate. As yet no systematized plan has been adopted, but the particular cases referred to and the work accomplished thus far has been investigated after a complaint from some one of the assistant commissioners or employees of the Department, or some city or town officer.

DETAILS OF THE WORK.

1. Building inspection.—This has included that of creameries, butter and cheese factories, milk shipping stations and stables. Many of the so-called creameries are nothing but receiving stations where the milk is recanned or bottled and shipped, after the animal heat is allowed to escape, or the cream is extracted, or the same is manufactured into butter or cheese and then shipped to market. The sanitary conditions about many of these places are very bad—sour milk, dirt and refuse is to be seen in many of these places over the floor and draining into the

cooling vats. The water in many of these vats was found to be foul smelling and highly charged with vegetable and animal matters, and we have the statement of the employees as well as our own impressions for leading us to believe that the same had not in many instances been changed in weeks. Into these vats the cans were slung, the water from the vats frequently splashing into the open cans, and often the same dipper that transferred milk from one can to another was also used in this cooling vat. Drainage from these buildings was found flowing into ponds and reservoirs from which ice was later on to be cut and this in turn used in connection with the milk, butter and other products. Stables, closets and vaults in close proximity to these creameries and factories with every possible and probable means of contamination of their products. This is no fanciful or overdrawn picture, but an actual fact, the reports of which form a part of the records of this department. The butter and cheese factories proper were found in most instances in a much better condition, although nearly all were without sufficient and proper drainage, and were liable to have their milk or manufactured products contaminated through nuisances maintained in close proximity to their water and ice supplies. Each agent of this Department working in localities where creameries and factories are maintained are now supplied with a blank form for reporting to the Department all such places that come under their observation, where bad sanitary conditions are found to prevail, after the following form:

STATE OF NEW YORK.
DEPARTMENT OF AGRICULTURE.
No...........

....................................189

....
Assistant Commissioner of Agriculture.

....

DEAR SIR:

I hereby report that I have this day visited..
....
....
....
that the building above referred to is situated in the city or village of....................,
town of.., county of.......................................,
State of New York. The nearest railroad station is..
on the..railroad.

DESCRIPTION OF PREMISES.

The building is apparently..
The cooling vats are apparently..
The creaming vats are apparently..
The sour or waste milk vats are..
The horse stable is..
The pig sty is...
The closets or urinals are...
The drainage about the building appears to be...

I am therefore of the opinion that an expert in sanitary matters should be sent to examine these premises to determine whether the milk there handled is unclean, unwholesome and unhealthy.

Respectfully submitted,

....

Agent.

On the reception of such a report at this Department, it has been our duty to investigate such particular cases, point out the dangers of possible contamination to the dairy food products of such factory, from such unsanitary conditions, designate the changes to be made, and, where subsequently it was learned that parties had not made requested improvements, to actively seek for *proof* of actual contamination, which has generally been forthcoming, in order to force needed improvement. This kind of inspection has been carried on chiefly during the summer.

Of stable inspection a great deal could be said. This work has been more systematically prosecuted especially in the fall and winter months, than any other. We have aimed to examine most of these places in and about large cities where experience has taught us to anticipate finding the worst places. It is scarcely possible for one who has not seen some of these places to conceive of the absolute filthiness of many of them, and the foul and unsanitary conditions in which dairy cows are kept. It is a very common thing to find them devoid of light and air, animals without bedding, stables without drainage, and foul manure water and offal settled all about them. It is very questionable whether any one should be permitted to keep a dairy for the production of milk and other products for public use, within the confines of any large city. There are scarcely facilities to be obtained in the way of light, air and other sanitary necessities for such purposes. Many of these places have been investigated after a complaint from some one of the assistant commissioners, and especially with a view of obtaining convictions, for many of them have long been eye sores to the officers of this Department, and their owners are old offenders. While such unsanitary conditions naturally would produce everything but a healthy condition in a dairy; yet it is a hard thing to prove experimentally or legally, as the law requires, hence conviction under this section of the statute have been hard to obtain, no matter how flagrant, in spirit at least, the violation may be. They have been had, however, in no less in six instances in the city of Rochester alone, after our personal investigations. The section of statute referred to reads: "No person shall keep cows for the production of milk for market or for sale, in a crowded or *unhealthy condition.*" A complaint to secure conviction must be based upon a state of conditions found and the proof must support the complaint. To prove however, that unsanitary surroundings actually produce in a given case an unhealthy condition in that particular dairy, that too, without positive symptoms of disease, is a difficult thing. But the dairies kept under the unsanitary conditions, in which many of them are seen, are in constant danger of infection, and that they are a menace to the health of the patrons of their milk and other products, there can be no question. These unsanitary surroundings may not always produce a diseased condition in the dairy animal, owing to its great cell resistance and natural immunity; yet the constant breathing of the noxious fumes arising from the filthy surroundings in their closed and ill-ventilated quarters, certainly has a tendency to lessen vigor and cell resistance, and thus predispose to disease. Once such diseased condition develops, the possibility of contamination of the milk supply exists; and whether such a diseased condition is produced as will positively affect the milk supply or not, the milk of all diseased animals is unfit for human consumption and is always to be excluded. Now, instead of separating such animals from the general dairy after actually diseased, it is much more economical and far safer to remedy the conditions that are liable to produce this disease, or at least predispose to it. But whether unsanitary conditions have or have not a tendency to produce disease in the dairy animal itself, and consequently, a diseased dairy product, there is another and a weightier reason to which we will later on refer, for insisting upon the relief from unsanitary conditions about the dairy animal, viz.: the possible and actual contamination of the milk supply, subsequent to its removal from the udder of the cow in all such places.

2. Dairy receptacle inspection. A careful scrutiny has been had of the milk cans in use at creameries, shipping stations and factories, as well as those of dairies where the milk is shipped directly to the consumer. Many of those cans have been found old, rusty, and very dirty with sour milk and refuse clinging on the crevices of the same. It is impossible to clean such cans, no matter what method is employed. In many factories as well as private dairies, attempts are made to clean cans, but the methods are so faulty that the results are negative. The method generally adopted is to wash cans in hot soda solution and then to brush them thoroughly and finally to rinse them in cold or tepid water. This is a very good method and is an improvement on that which seems to prevail in some places of not washing them at all. But even this method is faulty as is any other that stops short of complete sterilization. All cans after being first cleaned and scrubbed with hot soda solution and rinsed, should then be immersed for a short time in boiling hot water, and finally the interior should be rinsed with fresh boiling water, or better, where it can be had conveniently, they should be thoroughly steamed with live steam from a hose for a short time and thus finally sterilized. It is impossible that milk should be kept pure, sweet and wholesome under the conditions that prevail in reference to the cans in many dairies and factories. Not only are such conditions favorable for the development and multiplication of disease germs, if once they are so planted and the subsequent contamination of all other milk placed therein; but it is impossible to keep it sweet as the acid and other fermentative forms of bacteria that are already developed and in numerical strength, act in the nature of starters, and while it may remain sweet in the cooling vat of the creamery or dairy or in the course of transit when kept under the same favor-

able conditions of lower temperature; yet, when placed in the hands of the consumer under less favorable conditions of temperature, all such milk rapidly undergoes fermentation owing to the presence in great numbers of these bacteriological agents. To say the least such milk is not palatable and comes within the prohibited condition for milk, of the statute, as we read in the same article that unadulterated milk in the meaning of the law shall be construed among other things as meaning *sweet milk.*

Another thing observed in reference to these cans was that many of them that are used in transporting milk to distant markets are returned without ever being washed. Such cans may be seen at almost any point along railroad lines transporting milk. The interior of many of them is foul with sour milk and refuse. This condition increases the difficulty of cleaning and sterilizing when returned to the point of starting and makes all such attempts well nigh futile. We have also made an examination of butter packages and refrigerators in factories, with the view of detecting any possible contamination of the manufactured products of these places from such source. While there is little cause for complaint in this connection, yet we are impressed that there is a great deal of impure ice used which is often brought in direct contact with the manufactured dairy products in these cooling rooms.

3. Dairy product inspection. This forms perhaps the most important part of all inspections and furnishes only too often the evidence of a necessity for all other forms of supervision of the dairy industry. The maintainance of purity, cleanliness and freedom from diseased conditions of our dairy food products, especially that of the milk product is a very important and necessary thing and is specifically enjoined upon this Department by statute. That they are often unclean and even contaminated with disease producing agents and are the fruitful media of the spread of infection, can no longer be a matter of doubt. The former is often seen and is patent to all, while the latter has been demonstrated scientifically by bacteriological methods. A great many examinations, bacteriological and others, have been made

of dairy products and the results have proven conclusively the existence of contamination. While such contamination may not in all instances produce disease, yet, there is always a possibility of it and only too frequently it is an actual fact. This form of inspection should be always conducted in connection with that of an examination of the sanitary conditions under which these products are produced. It is impossible, perhaps, that any milk product should be gathered without including some dirt or extraneous matter, especially manure, and we would not seek to impose on our dairymen impossible conditions for securing cleanliness, but where milk is obtained, if necessary, in connection with a filthy stable and dirty cows and generally bad sanitary conditions, about the dairy animal or the creamery, scientific proof of such uncleanliness should be sought with a view of establishing a fact which might be hard to prove from a sanitary point alone. Hence we believe that the two forms of inspection should be practiced conjointly, and when bad sanitary conditions are found to prevail about the dairy or factory, scientific proof of the inevitable results of such conditions, namely; uncleanliness of the dairy products should be sought in a careful bacteriological examination of these products. This alone can make the present laws for the preservation of the cleanliness, purity and healthiness of our dairy products operative, for it will furnish the scientific proof of the existence of what the law aims to prevent. Where unsanitary conditions prevail to an extent that may be regarded as a menace to cleanliness and healthfulness of these products, a sample of the milk offered for sale from such dairies or creameries is to be taken in sterile tubes or bottles, under such careful methods as to preclude the introduction of any other material or organism except such as are already present, and the same is then to be submitted to a careful bacteriological examination at once if possible, but if not immediately, it is to be kept at a low temperature until such examination can be made. The presence in such sample of either the colon bacillus or bacillus subtilis, bacillus lactis arogenus, or the pus organisms, or any other pathogenic bacteria, or even the undue multiplication of the ordinary fermentative bacteria is to be taken as proof positive of uncleanness or contamination, and such examination is to be made the basis for complaint.

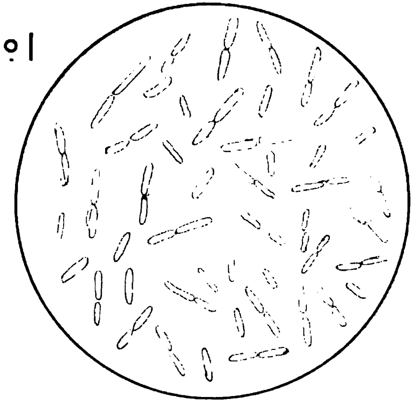
DESCRIPTION OF SOME OF THESE ORGANISMS.

The colon bacillus or the bacillus coli commune is a short rod closely resembling the typhoid bacillus, yet differing from it in several important particulars. It is a normal inhabitant of the intestinal tract of dogs, hogs, cattle and man and is found in large numbers in both animal and human excreta. While this organism has generally been regarded in the past, as a non-pathogenic or harmless bacteria, yet modern research and experimentation is causing bacteriologists to receive this statement with considerable reservation to-day. In fact the weight of opinion now seems to be in favor of regarding it under certain conditions and at certain times as pathogenic. Its constant presence in many diseased conditions and at times removed from its natural place, would seem to justify the assumption that under certain conditions with which we are not entirely familiar, this organism becomes pathogenic. It has already been shown to play an important role in certain diarrhoeal affections of children. (See illustration No. 1 of plate No. 1.)

It is rod-shaped with rounded ends and may occur singly or in pairs joined end to end. It is slowly motile, forms no spores, and grown with or without oxygen. The presence of this organism in milk to say the least is always to be regarded as an evidence of uncleanliness from manure contamination, which could only find its place there when the dairy animals are kept in a filthy manner, amidst unsanitary surroundings, or it is proof of uncleanness in milking or subsequent handling of the milk product from such dairy animals. All such milk products should be excluded from public sale because of their uncleanness if for no other reason. There is something so repugnant to the human mind in the thought of our milk products containing such filth that would

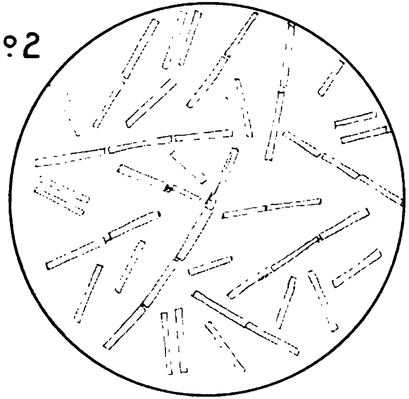
PLATE No. I

No. 1



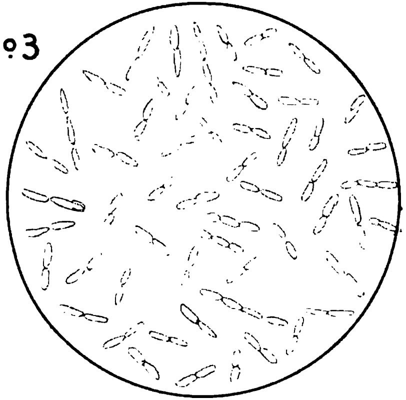
COLON BACILLUS

No. 2



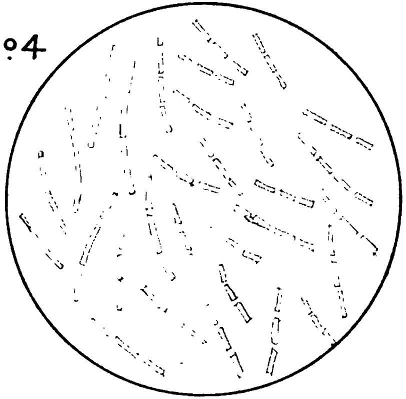
BACILLUS SUBTILIS

No. 3



BACILLUS LACTIS AROGENES

No. 4



BACILLUS TUBERCULOSIS

prevent our using the same did we know it, and it would seem that the State would be warranted in excluding such products from sale if there were no stronger reason than the one given, but as we have said there is a further and weightier reason for such exclusion, viz., the health of the consumer.

Another organism frequently found in milk is the bacillus subtilis and its existence there may be taken as proof positive of the presence in that milk of either manure or other stable filth. It is so frequently found on hay that it has been termed the "hay bacillus." The spores of this organism are found in enormous numbers in the secretion of animals. (See illustration No. 2 of plate No. 1.)

This organism is seen as long sylinders with square ends and is found singly, in pairs and in chains of two, three or six bacilli. This organism while not generally considered pathogenic may become so under certain conditions. Its presence in milk or other dairy products is a proof of uncleanliness from manure or other filth having gotten into the milk from milking cows that were dirty or subsequent to milking in a dirty stable or milk room.

The bacillus lactis arogenus, another filth organism, is frequently found in milk contaminated with manure. It is a short rod with rounded ends and closely resembles the typhoid and colon bacilli, yet differing from them in certain biological particulars when cultivated on artificial media. (See illustration No. 3 of plate No. 1.)

It is a normal inhabitant of the upper portion of the intestinal tract of animals. Its presence in milk is an evidence of contamination with animal excreta, and while not pathogenic or strictly so; yet it is a mooted question whether it is the harmless organism under all circumstances that it is generally regarded.

Of the tubercle bacillus and its relation to our dairy food products and its resultant effect on the public health through these products, much has been said in the secular press and much written in the scientific and medical papers of the day. That there should be such a wide difference of opinion of these relations and these effects among the laity, is not surprising when there are so many things in this connection yet unsettled from a professional and scientific standpoint. That it is a very important subject of inquiry because of its relation to public health there can be no question. Animals as well as men are now known to suffer from tuberculosis, the disease, too, being identical in all its symptomology and pathology in the lower with that of the higher order of animals. That it is a specific infectious disease dependent upon the tubercle bacillus as a causative factor and communicable to man from animals and vice versa, is now a proven and generally conceded fact. That heredity plays no part in etiology, except indirectly, as it may tend to produce a system weak in cell resistance and consequently more liable to infection, is another fact in this connection now generally accepted among scientific men. That there is a possible and actual source of danger to man from this disease through our dairy products, admits of scientific demonstration, and unfortunately is of too frequent an occurrence to require further proof even to a lay mind. Instances are only too numerous where this disease has been communicated by an infected animal through the milk supply to make it longer possible to deny its occurrence. On the other hand, *how much* of a source of danger to man there may be from the milk and other products of such infected animal is not so clearly a settled question, nor does it admit of so easy a demonstration. We should not make of ourselves public alarmists, but at the same time we should not close our eyes to a fact that has passed beyond the realm of speculation or mere scientific inquiry. Either extreme is to be avoided as calculating, the one to work great financial loss to the individual or state, and the other to lull the public mind into fancied security in the midst of at times great danger. Scientific inquiry wisely and rationally directed must be depended upon to point out the middle and proper ground, to pluck the wheat from the tares, the gem of truth from the dross of error. But with the suppression of tuberculosis, this Department is not concerned. That work has been charged by law upon another sanitary board. But in maintaining a milk product free of the germ of this disease, this Department is very much concerned. (See illustration No. 4 of plate No. 1.) The tubercle bacillus is a delicate rod, somewhat beaded in appearance, sometimes slightly curved but generally straight. It appears at times in short segments but never as long threads. It is an organism easily distinguished owing to its peculiarities in staining. It is very resistant to staining reagents, but once it is stained it retains the coloring matter against the strongest discolorings.

The presence of tubercle bacilli in any dairy product is to be regarded as one of the most dangerous of all contaminations. That there is such contamination, there is no longer room for doubt.

Fortunately, it is not large, in all probability, and is limited doubtless to that form of tuberculosis in the animal where the disease affects the udder. There is, however, some danger from the dried nasal product being brushed into the milk pail, where it may have been deposited about the udder from the cows licking themselves and each other. But the milk from all tuberculous animals is to be condemned and excluded from the public supply, whether udder disease exists or not, as a matter of safety. Its exclusion is to be accomplished as we shall attempt to show under another head by separating all cows affected with this disease from the herd used to furnish milk for public sale.

The pus organisms are frequently found in milk products and may gain access through an inflammatory milk duct or a diseased udder or any abcess formation on the cow or about the hands of the milker. The common forms are that of Staphylococcus pyogenus aurus, streptococcus pyogenes and bacillus pyosecyanus, although the staphylococcus pyogenus albus and citrus may also occasionally be found. Those organisms are to be regarded as among the most important of all the microorganisms. They are strictly pathogenic. The staphyloccus organisms appear as clumps of cells arranged like clusters of grapes. The streptococcus organisms appear with the cells arranged like a chain of beads of different lengths. The presence of all or any one of these organisms in milk is always to be regarded as dangerous and as showing a very bad form of contamination. (See illustrations Nos. 1, 2 and 3 of plate No. 2.)

As with that of tubercle bacilli the exclusion of these organisms from the milk and other products is to be accomplished by excluding all animals from participation in the milk supply intended for human consumption, that are affected in any manner with inflammatory conditions as well as preventing those persons who are in any manner affected with suppurative or other inflammations from handling any of these products.

Milk is frequently made the purveyor of the typhoid bacillus. Occasions are many where this disease has been communicated through the milk supply, either from persons handling the milk who have been in attendance upon typhoid patients or who have had the disease themselves or who are developing the same, or from introducing into the milk for the purposes of dilution or into the cans for cleaning purposes water already contaminated with the organism. At the present time an epidemic of typhoid fever is prevailing in several New Jersey towns due without any question to milk infected with the typhoid bacillus, through the water used in cleaning the milk cans. (See illustration No. 4 of plate No. 2.)

The typhoid bacillus is a delicate rod with rounded ends and may be seen as short ovals or as long threads. It is actively motile. It closely resembles the colon bacillus, yet may be readily distinguished from it.

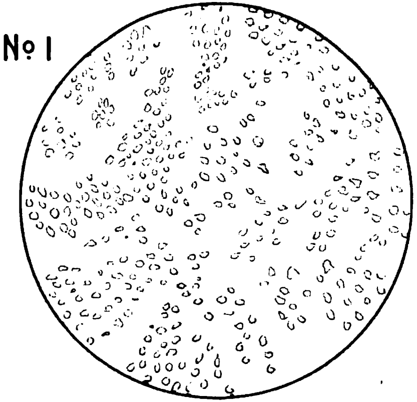
There can be no question but that this organism is a frequent form of milk contamination and that, too, a very serious form, as shown by statistics of some of the epidemics of typhoid fever directly traceable to such milk condition.

What is true of typhoid fever in its relation to the milk supply is equally true of diphtheria and scarlet fever. These diseases are frequently conveyed through those who handle the milk.

Sanitariums all over the country are coming to recognize the importance of our milk supplies as conveyors of infection and are seeing the necessity of a close supervision of the entire dairy

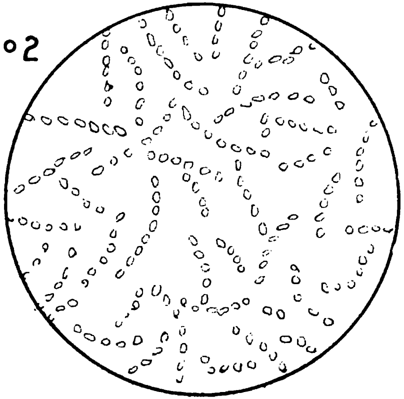
PLATE Nº II

Nº 1



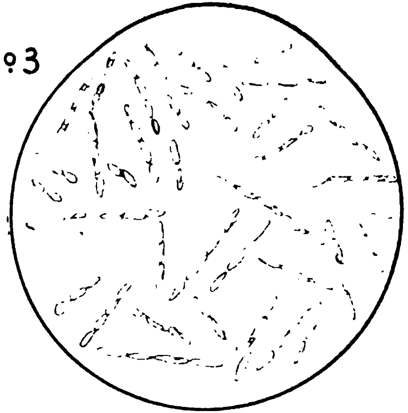
STAPHYLOCOCCUS PYOGENES AUREUS

Nº 2



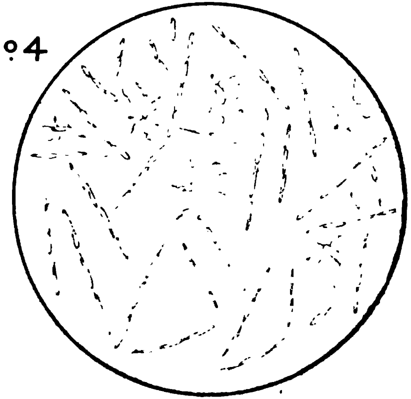
STREPTOCOCCUS PYOGENES

Nº 3



BACILLUS PYOSCYANUS

Nº 4



TYPHOID BACILLUS

industry. Its value as a media for the growth of most disease organisms and its extensive use as a food product necessarily makes it important in these respects. The preservation of our milk and other dairy products from these sources of contamination is to be accomplished by a close and careful inspection of not only these very products but the entire sanitary surroundings of each dairy, creamery or factory where these products are kept or manufactured for human consumption.

Now, there is just one thing more in this connection to which we would refer at this time and that is the importance to be attached to the undue multiplication of the saprophytic forms of bacteria, especially the fermentation forms as seen in our milk products. Milk as secreted in its natural condition contains no bacteria; it is absolutely sterile; that has been demonstrated a great many times. Were it not for the bacteria that gain access to it subsequent to its being secreted, milk would never sour. These organisms come from the milk duct, the udder of the cow, the hands of the milker, the milk pail and the air of the stable and milk room, and the number of these bacteria are in direct relation to the cleanliness of the dairy animal, its surroundings, that of the milker, the utensil used to receive the milk. The number of these organisms found in milk drawn and kept under reasonable conditions of cleanliness varies somewhat at different examinations and in the hands of different examiners. Some place it is as low as 250 per c. c., and others as high as 50,000 per c. c., while the numbers found where the conditions are recognized as being very bad are almost countless. Temperature too plays an important role in the subsequest multiplication of these bacteria, and in freshly drawn milk containing an excessive number of these bacteria it may be taken as proof positive of uncleanliness about such dairy animal or product. While no standard has yet been fixed for the average number of these organisms for milk drawn under reasonable conditions of cleanliness, it would seem there ought to be, and any undue departure from this standard should be regarded as an evidence of uncleanliness at least.

There is, however, something more attached to this question than that of uncleanliness. Many of our leading scientists are coming to believe that much of the diarrhoea seen in children at times when they are fed on milk is due to the secretion or elimination of the waste products of this large number of bacteriological agents. If future investigation should show this to be a fact, there will then be a still more important problem than that of mere cleanliness involved in the subject of the undue multiplication of the fermentative bacteria that will demand the attention of our authoritative bodies. The only remedy for these conditions of excessive bacteriological life lies in observing the greatest cleanliness and the highest sanitary measures about the dairy animal and the entire dairy industry.

4. Dairy animal inspection.—As far as we have been able to prosecute this work a careful inspection has been made of the physical condition of the dairy animal, sanitary surroundings and its food and supplies.

We have been materially assisted in this by Dr. William Henry Kelly, of Albany, N. Y., who is a very efficient and intelligent officer. This form of inspection lies at the basis of the prevention of certain forms of contamination of our dairy products. Besides dirt contamination that is liable to get in the milk product from cows that are filthy, there are certain diseased contaminations of milk that are directly transmitted from the dairy animal. Fortunately, as we have said, such diseases and conditions are not numerous. The tubercle bacillus and the pus-organisms, however, may be directly transmitted from the cow to the milk supply; although it is now a well established fact that a tubercular animal is not generally capable of transmitting the tubercle bacillus except in those cases where the udder is the seat of the tubercular process. Just when this process has so affected the milk duct or surrounding tissue as to admit of the tubercle bacillus finding its way into the milk supply, it is hard to determine. While the detection of any hardened tissue or nodular masses or enlarged glands about the udder or in the vicinity of it would point strongly to the probability of such invasion, yet it is possible that the mischief may already be done, or in other words, it is possible that such contamination of the milk secretion may have already taken place before there is any external evidence of udder disease. It is hardly safe, therefore, to wait for positive external evidence of udder disease before the milk of such animal is excluded from that of the general supply. Again, one of the early symptoms of this disease in an animal is cough and nasal discharge, and whenever this is taking place there is always a possibility, ay, a strong probability that some of this nasal discharge, which is nearly always loaded with bacilli, may be deposited on the udder of this or some other cow by their frequent licking of themselves and each other, where it becomes dried and later on finds its way into the milk pail; or it may be deposited about the stable and become dried and pulverized, and later on through the dust of the stable find the same resting place. Policy, as well as wisdom, therefore, would seem to demand the prompt and complete isolation of all animals no matter how slightly affected with this disease, and the exclusion of all milk from such animals from that intended for animal or human consumption. It is always better to error on the side of safety any number of times than to make a single mistake on the other side. This plan, too, works no hardship to the owner as it is one of the chief means to be adopted in preserving the balance of the herd. Accepting such conclusions as a fact, the next question that naturally suggests itself is, "How should this inspection be carried on?" Shall it be simply a physical examination or shall we employ every other means at our command? Shall we also use what is now known as Koch's Tuberculin? We have in this agent a reasonably sure means of detecting those latent and obscure cases of tuberculosis which, while not an immediate danger to our milk supply or to the health of other animals, yet which may become so at any moment, as we have said, and policy and reason would seem to justify its use. The modus operandi of this preparation is now well understood. It is simply introducing into the system suddenly an amount of the poisonous toxine of the tubercle bacilli beyond what it is accustomed to, and to which it has already become tolerant. The systemic effect of this with that of a localized inflammatory action, set up about the tuberculous focii, is to produce a sudden but temporary elevation of temperature. All suspected cases of latent tuberculosis showing this reaction under the use of this preparation may be safely so diagnosed. It would seem that a careful physical examination or inspection of our dairy herds, coupled with that of the use of tuberculin in all questionable cases, would offer the best means of meeting the requirement of this work. Beyond the discovery and isolation of these cases, to prevent contamination of our dairy products and the spread of the disease to other dairy animals, this Department is not privileged to go. At this point it's duty ends. The work of suppression and extirpation and the adjustment of the financial losses arising therefrom, has been entrusted to the Health Department of our State, to whom all such cases coming under cognizance of this Department is referred for final disposition and adjudication. A careful inspection of the dairy animal is also made with a view to determine the presence of any abcesses or ulcerations or any inflammatory conditions about the udder. From all such focii, pus-organisms are liable to gain access to the milk supply, either directly or indirectly, and all animals so affected are to be isolated and the milk from the same excluded from public sale. Of the sanitary surroundings of the dairy animal, the influence of light, air and cleanliness great importance should be attached. Reference has already been made to the same under the head of *stable inspection*. Of air it is proper to say, however, that each dairy animal ought to have from 400 to 600 cubic feet of air space with a proper means for the inlet of fresh air and the outlet of the foul. All stables must have proper means of ventilation. It is not so much a question of air space as it is admitting a constant supply of fresh air and eliminating the foul. An inspection of the food supplies of dairy animals has also been made and a number of violations of the specific commands of the statute have been noted. Brewer's grains in a state of putrefaction have been found in a number of instances. In some sections of the State dairymen buy these grains in the hot season when the price is low, cart them often for considerable distance or ship by rail, and finally pit them after the manner of ensilage, and during the cold season feed them. While this plan might be perfectly feasible and work well in practice provided such grains are sweet when pitted, if soured and in a state of putrefaction as we have seen them, they can never be fit for food. The use of such grain is a plain violation of the statute. Swill, garbage and distillery waste grains are also fed to some extent in some sections as we have detected. Especially is this true in some of our large cities and along the river front. Efforts are being continually made to detect and prevent the continuance of such practices, which have a tendency to lower vitality and lessen cell resistance in the dairy animal and which are plain violations of law.

And now after this summary of the santiary and bacteriological work of this division of this Department, we trust that we may be permitted, in conclusion, to make a few deductions from this report and to respectfully offer some suggestions for what we deem would be for the improvement of the service.

1. We regard this kind of supervision of our dairy products as among the most important of all. While an inspection to prevent dilution of our milk product aims to protect the *pocket books* of the patrons of our dairies, an inspection to prevent contamination aims to protect their health.

2. We believe that such supervision of our dairy products to be practical, that it can be accomplished without great expense and that it can be so perfect and complete as to practically keep the entire dairies with their food products under observation and generally free of contamination.

3. This work should not stop here after this preliminary inspection, but should be carried forward until methods are perfected and it is put on a definite and permanent basis.

4. This investigation as far as it has progressed into the conditions and methods that prevail about our dairies with regard to the care of our dairy animals and products, teaches the necessity of it and justifies the outlay necessary to carry it on, and the con-

stantly increasing consumption of our dairy products, and an increasing sensitiveness on the part of the public as to the purity and healthfulness of these products, clearly demands it.

6. The present law is a weak one and is not moulded on scientific lines and should be amended. It refers to impure, unhealthy and unwholesome milk as *adulterated* milk. The use of the term adulterated in such connection is a questionable one. Again the law should be amended in this respect, that it either increases and enlarges the powers and duties of the Department of Agriculture along these lines, or that it transfers the entire work of the supervision of the purity and healthfulness of our dairy products to the Department of Health. As it is, the law provides for two separate and distinct sanitary boards, one the Department of Agriculture and the other the Department of Health, each charged with the same identical duties with regard to the supervision and care of our dairy food supplies.

7. This work if continued should not be after any manner offensive to our dairy interests or after a method of hardship with always a strict and technical construction of the law, but should be along the lines of education. Most people engaged in the dairy business are open to reason and are desirous of improvement, and a great many of the unsanitary conditions observed are more the result of a lack of understanding of the importance of sanitary methods, rather than from carelessness or indifference of the health of their patrons. And as knowledge increases and sanitary measures become more clearly understood and their importance more fully appreciated, improvement in our methods will surely follow and that too without enforcing in all cases the exact letter of the statute. The work must, therefore, be one of education and not rigorous exposition of law.

Yours respectfully,

A. L. HAINES,

Bacteriologist.

Remarks on Anthrax and Rabies with Special Reference to Outbreaks Recently Investigated.

By Veranus A. Moore, B. S., M. D.
Professor of comparative Pathology and Bacteriology, New York State Veterinary College, Cornell University, Ithaca, N. Y.

I.

During the summer and fall of 1897 one outbreak of anthrax and two of rabies have come to our notice. In addition to these a few specimens of organs from animals supposed to have died of anthrax have been sent to this laboratory for diagnosis, but the examinations have given negative results in all these cases. In the outbreaks about to be mentioned the investigations were in case of the rabies restricted to making the diagnosis, but with the anthrax Touissant's preventive treatment was tried. On account of the infrequency of the occurrence of these diseases, and the fact that there are still many people who believe that they do not exist in this country to such an extent as to render them of any practical importance, it has seemed desirable to call attention not only to the existence of these maladies but also the methods of diagnosing and preventing them. It is necessary in order to secure the highest protection for our live-stock interests that these maladies should be better understood, for of the infectious diseases common to men and the lower animals, these are, next to tuberculosis, most deserving of attention. The significance of these affections may be more fully appreciated from the fact that anthrax has already been reported in fifteen States, and rabies is annually causing hundreds of deaths among domesticated animals as well as destroying many human beings.

It is, therefore, incumbent upon every citizen to take all necessary precautions to prevent the entrance of these maladies and to use all possible means to eradicate them if, perchance, they should make their appearance in the future.

AN OUTBREAK OF ANTHRAX NEAR ELMIRA, WITH RESULTS OBTAINED BY TOUISSANT'S PREVENTIVE TREATMENT.

At the request of the Hon. C. A. Wieting, Commissioner of Agriculture, I visited Elmira, September 24, 1897, to make an investigation into the nature of a destructive disease which had appeared among the cattle on a farm in that vicinity. Three of the farm hands were also affected, but eventually they recovered. I was accompanied to the infected herd by Dr. Wadsworth, of Cobleskill, and Doctors Ross and Jeffery, of Elmira. At this time the disease in the attendants had been diagnosed by Dr. Ross as malignant pustule, and on the basis of this diagnosis he had assumed that the disease among the cattle was anthrax and had brought it to the attention of the Commissioner of Agriculture.

It was learned that on September 8th, a cow which had been kept on another place was found sick and brought home. Later she died, and in skinning this animal the attendants were infected. The disease first appeared in the men, September 11th. September 16th a second cow died very suddenly, September 21st a third cow died and on the 23d three more were buried. At the time of our visit one cow was in a state of collapse. Although the diagnosis of malignant pustule in the attendants seemed to be correct, a positive diagnosis of the disease in the cattle was of much importance. To this end the sick cow was killed and carefully examined.

Cow No. 1.— Large, well developed cow in good condition, temperature 98 degrees F. Unable to walk, killed by a blow on the head and by bleeding. Two liters of the blood were collected in sterile jars. Blood not abnormally dark or thick, the spleen seemed to be slightly darker than normal. On the omentum were numerous slightly congested tufts. Otherwise the abdominal organs appeared to be normal. There was a small quantity of clear urine in the bladder. The heart and lungs appeared to be normal. Several tubes of agar and gelatin were inoculated from the heart blood, spleen, liver and kidneys. Pieces of these organs were placed in sterile jars and brought to the laboratory where they were carefully examined.

The post-mortem examination left serious doubts in the minds of all present concerning the nature of the disease. The absence of practically all the lesions described as being typical of anthrax gave ample reason for the manifest doubt. The autopsy was made about noon and later in the afternoon the tissues were examined microscopically in the laboratory. Stained cover-glass preparations from the spleen showed large numbers of anthrax bacilli. In similar preparations made from the liver, kidneys, and blood there was a less number of the organisms. On the following day all the inoculated tubes contained apparently pure cultures of the anthrax bacillus.

On the second day the growth in the gelatin tubes appeared. They were all pure cultures of *bacillus anthracis*. The bacteriologic examination, therefore, proved the existence of anthrax. Without this examination the positive diagnosis in this animal could not have been made.

September 26th, I again visited the herd and found that a Jersey cow had been taken sick the evening before and had died just before my arrival. Three others were found to be affected as indicated by the temperatures which were 105, 105.7 and 107.7° F. respectively. The dead animal was carefully examined.

Cow No. 2.—Small Jersey cow. Blood was oozing from the anus. The abdominal cavity contained a considerable quantity of blood-stained serum. The blood was very dark, the spleen was enormously enlarged, very dark colored, soft, and the capsule contained ecchymoses. Upon section the blood and pulp flowed quite freely. The liver was slightly congested, kidneys deeply reddened and in the bladder there was a small quantity of dark wine-colored urine. On the omentum were numerous hyperaemic tufts. The intestines were hyperaemic. There were several ecchymotic areas beneath the pericardium. The lungs were congested. About two liters of the blood were collected from the vena cava. Portions of the spleen and liver were brought to the laboratory where a microscopic examination and cultures were made. These revealed the presence of anthrax bacilli.

About 20 c. c. of milk was taken from each teat in sterile tubes, for examination. The milk from one quarter was slightly blood stained, but from the others it was normal in appearance. Upon microscopic examination the anthrax bacilli were found in the preparations made from the blood-stained milk but they were not discovered in those made from the other specimens.

Guinea pigs were inoculated subcutaneously with 2 c. c. of the milk from each teat. They all died of anthrax in from 24 to 72 hours, showing that the bacilli were present in each specimen although not numerous enough, with the one exception, to be easily detected microscopically.

Milk was also collected from one of the cows which was sick and had been for two days. Her temperature, when the milk was taken, was 106.5° F. This was examined microscopically and two guinea pigs were inoculated subcutaneously with 3 c. c. each. No anthrax bacilli were found in the preparations and the guinea pigs remained well. This cow recovered. Another specimen of milk was taken from a cow having a temperature of 105° F. The examination gave negative results. It would seem, from the few examinations made, that the bacilli in the milk from cow No. 2, had gotten into it just before or immediately after death. There are cases reported, however, where the disease has been contracted from drinking the milk of affected cows.

Some difficulty was encountered in the disposal of the dead animals. Those which had died before our visit had been buried and fortunately, with the exception of the first, without being opened. It was necessary to examine post-mortem the last two for the purpose of diagnosis. Unfortunately it was not practicable to burn the animals, and consequently they were buried deeply and the bodies covered with a liberal quantity of quick lime. The owners were directed to cover the surface over all the graves with a thick layer of lime and to put a fence around them, thus preventing other animals from grazing over them.

The importance of this outbreak does not stop with the losses sustained in this herd. The fact that the disease was brought on the farm by the cow which contracted it on a neighboring farm, is significant in showing that the place where the disease was found, is not the only infected spot in the neighborhood. It is rumored that several cows have died, presumably of anthrax, during the fall on a near-by place. It seems that losses are being sustained in that locality from this disease without the owners of the cattle recognizing its true nature. In consequence of this the dead animals are inadequately disposed of and the barns and yards are not disinfected. Unless active measures are taken to destroy the virus in all these cases, the future promises to see this section so saturated with anthrax that dairying will become practically impossible. However, if such precautions as are known to be effective are taken, it seems to be an easy task to eliminate the disease, although several years may be necessary to accomplish it.

PREVENTIVE TREATMENT.

Up to the time of the first visit, September 24th, seven cows including the one killed for examination at that time had died. There were still twenty animals in the herd. The sick were being separated from the others as soon as they showed signs of disease, but it was evident that the entire herd had been exposed and that the pastures and cattle yards had very probably become quite generally infected. The stables were thoroughly disinfected with sulphuric acid and the yards covered with lime. It was decided, however, to try preventive inoculation according to a modification of the method recommended by Touissant, as this could be applied with little delay, which in this herd seemed to be of great importance. Further, Dr. Law has for several years followed this method with success in several serious outbreaks which have come under his observation.

The method recommended by Touissant is to heat the defibrinated blood from an animal dying, or just dead, from anthrax, for from ten to fifteen minutes at a temperature of from fifty to fifty-five degrees C. Dr. Law has followed the practice of heating the blood to a much higher temperature in order to be sure of the death of all bacilli present. It seemed, however, that we should be assured by actual cultivation tests that the heated blood was free of all living bacilli or spores before it was injected into healthy animals. Accordingly the blood collected from cow No. 1, was brought to the laboratory, diluted after Dr. Law's method, thoroughly heated in an autoclave, strained and filtered. The filtrate was placed in small flasks and boiled. After cooling a number of tubes of bouillon and agar were inoculated from it. These remained sterile. On the 26th, this preparation of blood was used on all the cattle still living in the herd. The blood preparation was injected subcutaneously in the dose of 4 c. c. in each of the well animals. The injections were repeated and the temperatures taken by Dr. Jeffery, of Elmira, on each of the two following days. The outcome was eminently satisfactory as not one of the animals treated showed a rise of temperature after the injection. The temperatures were again taken October 6th. They were all normal.

As already stated, on the date of injecting the cows we found three sick animals. It was not thought desirable to inject these, as their death seemed to be inevitable; but as the owner thought they would die anyway, he was anxious that they should be included, and his request was granted. The effect of the treatment on the three sick animals was quite surprising. The temperatures at the time of the first injection was 105.7, 106 and 107° F. Two days later they were 102, 101 and 106.6° F. respectively. The temperatures taken subsequently showed that those of the first two remained normal and that of the third gradually subsided, reaching the normal in about two weeks.

The successful results obtained in preventing the spread of the disease in this herd are in accord with those heretofore experienced by Dr. Law. The facts that the cattle were coming down with the disease at the rate of two a day when the treatment was begun, and that the thorough disinfection of the barns was not completed, owing to an accident with the disinfectant, until two days later (September 29th) suggests that the preventive treatment possessed some degree of efficiency. Laboratory experiments on the smaller animals, and also on cattle, are now in progress by which it is hoped to determine to what extent, if any, the heating of the blood to a higher temperature will affect the efficiency of the original method. We do not feel that the blood heated at the low temperature recommended by Touissant is safe, although it seems to have many adherents in France. If this process can be rendered safe and possessed of the same degree of efficiency that it has appeared to have in this outbreak, it would seem to be more practicable and a much safer prevention than the Pasteur vaccine treatment.

Pasteur's method consists in inoculating the animal with a small quantity of a culture which has been cultivated at a high temperature—42-43° C.—for several days. This deprives the bacilli of their virulence. To strengthen the resistance, the animals are again inoculated with a stronger virus. After the two inoculations they are said to be protected against the most virulent anthrax, but this immunity is of short duration. Chamberland reported in 1894 that a total of 1,988,677 animals had been inoculated in France, and that the loss from anthrax had diminished from 10 per cent. in sheep and 5 per cent. in cattle to less than 1 per cent. Cope, in his report to the English Board of Agriculture, regards the conclusions of Chamberland as somewhat fallacious, because in order to prove that the animals inoculated received immunity, it should be shown that they were subsequently exposed to the risks of natural infection. The excellent work which has been done by Neal and Chester, at the Delaware College Experiment Station, has shown the possible efficiency of this method. Of the 331 cows which they vaccinated against anthrax, two died of the disease, giving a death rate of less than 1 per cent., and this in a territory so saturated with the virus that it was practically impossible to keep cattle at all before its use.

A more critical study of the reports on the use of this vaccine shows that while success can not be denied, failures must be admitted. It is reported both in England and Germany that the Pasteur vaccine has not been a marked success. In England, Klein, who tested the vaccine used in that country, found that if the animals did not die from the effect of the vaccine, they did when exposed to the disease. The German veterinarians and agriculturalists agree that the first vaccine is mild and harmless, but that the second vaccine, even in the hands of experts, is dangerous and often fatal. The fact is reported to have been demonstrated by experiment that the virulence of the attenuated virus is easily restored. Again, it has been shown by the investigations of Chester and Neal, of the Delaware College Agricultural

Experiment Station, that a vaccine which succeeded at one time subsequently proved fatal. The vital objection to this method is that it requires the use of the living bacilli which may become virulent. The scattering of pathogenic organisms, even in an attenuated condition, should, if possible, be avoided. It must be admitted, however, that this method has done great good and helped to rob anthrax of much of its former terror, especially for the farmers of Europe. Notwithstanding, it is highly probable that the spreading of a knowledge of the cause of this disease has also had a great influence in checking its ravages.

In Germany and England the stamping-out system is considered superior to vaccination. According to Crookshank, in England it is regarded as the only reliable means of suppressing the disease. To this end rigid laws have been enacted. In this State steps for its eradication seem infinitely better than the adoption of methods for establishing a tolerance for its existence.

THE CAUSE OF ANTHRAX.

As early as 1849, Pollender called attention to peculiar rod-like bodies in the blood of animals dying of anthrax. In 1863, Davaine published the results of investigations in which he showed that the disease could be produced by inoculating animals with the blood or tissues containing these rod-shaped organisms. Later, Koch isolated the bacilli, cultivated them on artificial media and with these cultures he produced the disease. This established the specific nature of anthrax.

The bacillus of anthrax (*Bacillus anthracis*) is a rod-shaped organism varying in length from one to four microns, but having a quite uniform breadth of about one micron. In a suitable medium it grows out in long flexible filaments, which combine to form thread-like bundles. When examined, the ends of the rods seem to be square cut. In preparations from animal tissues there appear sometimes to be slight concavities in the ends of the segments when two of them are united. In old cultures spores are formed. These are oval, highly refractive bodies held within the cellular envelope of the filaments, but later they are set free by the dissolution of this membrane. It stains readily with the aniline dyes and also by Gram's method.

The bacillus of anthrax is aerobic. It grows on all of the ordinary culture media at a temperature of from 20 to 38° C. It does best in a neutral or slightly alkaline medium. Its growth is arrested in acid media. In bouillon it develops in ragged somewhat flocculent grayish masses, which are usually held in suspension. In gelatin tube cultures a grayish growth appears along the line of the needle puncture, from which lateral, thread-like ramifications extend. The gelatin begins to liquefy on the surface in from two to three days. On agar the colonies are quite characteristic, appearing under the microscope to consist of interlacing filaments. Gas is not formed in bouillon containing sugars. It does not produce indol. The casein in milk is at first coagulated and later digested leaving a clear brownish colored fluid. It is pathogenic for nearly all the smaller animals, destroying rabbits, guinea pigs and mice in from twenty-four to forty-eight hours, the essential lesions being a local œdema.

In diagnosing this species it is to be differentiated from the groups of bacteria which are represented by the bacilli of malignant œdema and of symptomatic anthrax or *Rauschbrand*. It is also sometimes confounded with a rod-shaped organism usually present in decomposing animal tissues. All these organisms are anaërobic, and, in their morphologic and biochemic properties, they differ from each other and from the anthrax bacillus. *Bacillus subtilis* has occasionally been taken for the anthrax bacillus but it is readily separated in cultures. It is important, however, to recognize the possibility of an error, if the conditions restrict the examination to the study of but one or two characters or properties.

The bacillus of anthrax itself is not an especially hardy organism, but on the contrary it is easily destroyed by weak disinfectants and it has a low thermal death point. On the other hand its spores are among the most hardy of bacterial life to resist chemical and thermal agents. They resist drying for months or years and often boiling for a half hour or longer does not destroy them. On this account it is very difficult to eliminate the virus from infected pasture lands, especially if they are wet or marshy.

The question is naturally asked, how are these bacteria introduced, where do they come from, and what are the channels through which they are able to pass from one locality to another? These are questions of the first importance in connection with the prevention or eradication of the disease. It should be stated that thus far investigations have failed to reveal any definite knowledge pertaining to the distribution in nature or the origin of the bacillus of anthrax. We are forced, therefore, to conclude that wherever the disease appears its virus has been introduced in some way, at some previous time, although it may have been years in the past.

In fact it has not been difficult in most cases to find a means of entrance. As the spores may remain in the soil in a dormant condition for many years, it sometimes happens that the disease does not appear until long after the introduction of the virus. Anthrax has been known to break out among cattle grazing on a field in which were buried many years before the hides from affected animals. Through some means the spores were able to get to the surface and contaminate the grass. Pasteur thought the earth worms were active agents in this work. Koch's investigations tend to disprove this theory. The spores may be introduced through blood or bone fertilizers. The skin, hair, wool, hoofs and horns could if taken from infected animals carry the virus to the place of destination of these articles. When the extent of this traffic is realized, it is easy to understand how anthrax has been brought to this country and why it occasionally appears here and there over a large part of the continent. Many outbreaks, as well as isolated cases, illustrating this common method of dissemination are on record.

II.

TWO OUTBREAKS OF RABIES.

On account of the infrequency of rabies there is, as might be expected, much indifference concerning it until an outbreak of greater or less importance actually occurs. When a dog is suspected of being mad it is usually killed and buried without having the true nature of the disease from which it suffered determined. This practice is unfortunate especially if the suspected dog has bitten other animals or men. If the positive diagnosis is made it tends to relieve the anxiety of those concerned. If it is in the affirmative, precautions can be taken by keeping the exposed animals either in confinement or by destroying them at once, and all persons who have been bitten can avail themselves of the Pasteur treatment which has become recognized as a highly effective prevention if taken in time.

This suggests the question, how can a positive diagnosis be made? It is to the investigations of Pasteur, and others following his methods that we are indebted for a method by which the diagnosis of this most dreaded of all diseases can be made. Although rabies is a specific malady its etiological factor has not been isolated, but Pasteur has shown that it is always present in the brain and spinal cord of the affected animal. He has also pointed out the fact that if rabbits or other experimental animals are inoculated beneath the dura with a drop of a suspension of the brain from the rabid dog, they will develop the disease after a certain length of time. This method is now in general use among pathologists for diagnosing rabies. Some workers use guinea pigs but ordinarily rabbits are taken. In the writer's experience the symptoms are more marked in rabbits than in the guinea pig.

The method as ordinarily followed is this: The brain of the animal supposed to have died of rabies is removed under aseptic precautions and placed in a sterile jar. A small piece of it, usually from the medulla, is ground in a sterile mortar with a few cubic centimeters of sterile water or bouillon until the brain tissue is held in suspension in fine particles. The rabbit is then etherized, the hair clipped from the forehead, and the skin thoroughly washed with a disinfectant. A longitudinal incision is made in the skin which is held back, a crucial incision is made in the periosteum at one side of the median line, the points turned back, and with a small trephine a disk of bone is removed leaving the dura quite exposed. With the hypodermic syringe, a drop of the brain suspension is easily injected beneath the dura, the periosteum returned and the wound in the skin washed with a disinfectant. The rabbit soon recovers from the anaesthetic. The inoculation wound heals rapidly, and the animal appears to be perfectly happy until the premonitory symptoms develop. This should not occur for at least ten days in cases of street rabies. The first symptoms usually appear in from fourteen to thirty days; occasionally they do not develop for a much longer time. The writer* has observed fifty days to pass before they appeared in a few rabbits.

The symptoms are not well marked at first. They consist of a slight nervousness then paralysis beginning usually in the hind legs. The paralysis gradually creeps forward so that, in from a few to twenty-four hours, the rabbit lies on its side unable to rise or move. It lives in this condition from a few hours to one or two days. In exceptional cases longer. Ordinarily the paralysis lasts from twelve to twenty-four hours.

Just prior to the development of the objective symptoms there is a rise of from one to two degrees in the temperature. This lasts from twenty-four to forty-eight hours when usually it rapidly subsides and, soon after the paralysis begins, it is subnormal, often reaching as low as 96° F., several hours before death.

The conditions found on the post-mortem examination are also of much assistance in making a diagnosis. If the animal died from septicaemia or brain injury, there should be lesions recognizable in the brain or viscera. In the case of septicaemia a bacteriologic examination will reveal the presence of microorganisms. If death was caused by rabies the inoculation wound in the head should be healed perfectly, there should be no abscess, and the meninges should be free from exudates and the brain itself should appear perfectly normal, except that in some cases there may be a slight injection of the blood vessels. The viscera are ordinarily normal in appearance, with possibly the exception of the liver, which is frequently found to be deeply reddened. The gastric mucosa occasionally shows dark patches which appear to be disintegrated hemorrhagic areas. A bacteriologic examination fails to reveal the presence of micro-organisms in either the parenchymatous organs or blood.

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*Bulletin No. 10, Bureau of Animal Industry, U. S. Department of Agriculture, 1898.

The differential diagnosis in experimental animals is not difficult. Rabbits inoculated with several varieties of pathogenic bacteria frequently exhibit symptoms of paralysis for a brief period preceding death. In cases of injury to the brain or spinal cord there may also be paralysis which in the absence of the history of the case might be taken for that of rabies. In these cases, however, the symptoms appear very soon after inoculation. This is especially true when the paralysis is due to mechanical injury of the brain or to irritating or septic substances, and in the case of the pathogenic bacteria if paralysis occurs, it is preceded by a period of greater or less time during which the animal was sick. The method of diagnosing rabies requires that the inoculated animals remain apparently well for a considerable length of time after the subdural inoculation and before the paralytic symptoms appear.

Although the diagnosis of rabies in the street dog is often exceedingly difficult from the symptoms manifested, it is a simple and very easily diagnosed disease if the rabbit inoculation method is followed. While we are as yet ignorant of the specific agent, we have in the brain such a localization of it that for all practical purposes the brain or spinal cord of the affected animal may be used, as a pure culture of the virus. With it the disease can be produced and with it, through a process of attenuation, the disease can be prevented as shown in the Pasteur treatment.

The economic importance of rabies is of much more significance than is generally supposed. During the past year numerous outbreaks of rabies among cattle, horses and swine have been placed on record. The fact that rabid dogs frequently wander miles into the country and are prone to bite all men and animals happening in their way, frequently results in many victims from one dog. While statistics are not available from which even the approximate number of animals destroyed by this disease can be determined, it is known to be large. A conservative estimate would place the annual number among the thousands, and the human victims are numerous. While all who are bitten do not contract the disease, it is the exception, when a known rabid dog bites several animals that one or more of them do not die of the disease. The appended description of the cases and the method employed in making the diagnosis in animals dying in two outbreaks of rabies which occurred in this State during the summer and fall just past and which were brought to the notice of the Commissioner of Agriculture, and were investigated by his authority, are good illustrations of the disease.

Rabies near Saratoga.—According to reports, a shepherd dog belonging to Mr. Hart began to act strangely about May 12th. During the next few days he bit several dogs, three cows, Mr. Hart, his son and a neighbor. The neighbor took the Pasteur treatment for rabies. Two of the cows which were bitten and Mr. Hart died of rabies. There appears, however, to be a doubt concerning the diagnosis in the case of Mr. Hart. Unfortunately there seems to have been no post-mortem, and inoculations with a bit of the brain or spinal cord were not made. The son remained well. The bitten dogs were, with one exception, killed. These are the essential facts concerning the history of the cases as I gathered them from the letters received from Dr. Childs and Dr. Kelly. For the full particulars the reader is referred to the official report of Dr. W. H. Kelly, who made an investigation of the outbreak for the Commissioner of Agriculture.

Cow No. 1.—June 21st there was received at this laboratory, from Dr. Childs, of Saratoga Springs, the brain and a portion of the spinal cord, one kidney, a small piece of the lung and three mesenteric glands from a cow supposed to have died of rabies and also to have been slightly affected with tuberculosis. In my absence the material was carefully looked after by Dr. P. A. Fish and Mr. R. C. Reed. The tissues were badly decomposed, but they decided to make inoculations from the spinal cord, which seemed to be in a better state of preservation. Accordingly, they inoculated two rabbits beneath the dura with a drop of a suspension of the spinal cord. One of these died during the night from septicaemia and the other remained well. The negative results in this case were of little value, owing to the advanced post-mortem changes which had taken place in the tissues before the inoculation.

This cow was thought by Dr. Childs to be affected with tuberculosis. Mr. Reed made a careful microscopic examination for tubercle bacilli, but failed to find them. A rabbit was also inoculated subcutaneously with a piece of the supposed tubercular nodule from the lung. It remained well.

Cow No. 2.—July 6th, I received the brain from a second animal which had died with symptoms similar to those manifested by cow No. 1. Mr. A. B. Kelly, who sent the brain, thought the animal had died of rabies, while others were quite as confident that the cause of death was something else. This time the brain was sent in glycerine and it was received in good condition.

July 7th, two rabbits, Nos. 43 and 44, were inoculated beneath the dura with a drop of the suspension of a bit of this brain in bouillon.

July 29th, rabbit No. 44 was found partially paralyzed at 7 A. M.

July 29th, rabbit No. 43 nervous but otherwise apparently well. At 10 A. M. No. 44 was completely paralyzed and No. 43 was apparently better, but towards night it became completely paralyzed. They died during the following day.

The rabbits were carefully examined and cultures were made from the various organs, but they remained sterile.

The lesions, or rather the absence of lesions, were typical of rabies, and there is no doubt that this was the cause of the cow's death. This positive diagnosis furnished the local health officers definite information which was necessary to enforce the proper management of the remaining animals which had been bitten. These were safely disposed of and no further cases have been reported from that vicinity.

Rabies at Chatham.—September 18th, I visited Chatham in company with Dr. Kelly to make an investigation into the nature of a disease resembling rabies, which had appeared there. From Dr. H. B. Ambler, who had charge of the cases, the following history was obtained:

About the middle of August, a black, shaggy dog made its appearance in that village. It seemed to be quite friendly, but succeeded in biting several dogs, one horse and five cows before he disappeared from the community. No one seemed to know where this dog came from or where he went to. During the fore part of September two dogs died in Chatham of a disease resembling rabies. About the middle of September, a cow belonging to Mr. H., developed symptoms of rabies and died. A few days later a second one died and the brain was removed by Dr. Ambler. At the time of my visit a third cow was sick and a dog had just died. The dog was examined and its brain brought to the laboratory. The cow died three days later, but owing to Dr. Ambler's absence, was not post-mortemed. From the symptoms manifested on September 18th, there is little doubt of the accuracy of the diagnosis. Later, I received the brain from a cow in another herd which had been bitten by the same black dog. A cow in the adjoining field and the horse which were bitten by this dog died with symptoms of rabies. Later, another of the bitten dogs came down with the disease and was killed. Mr. H. the owner of the first cows mentioned, tore his hand on the broken horn of the first cow which died. Fearing that he had been inoculated, he took the Pasteur treatment.

INOCULATIONS FOR DIAGNOSIS.

Cow No. 2.—This was the second cow to die from the herd belonging to Mr. H. The brain had been kept in glycerine for two days. September 19th, rabbits Nos. 52 and 53 were inoculated beneath the dura with a drop of the suspension prepared from this brain.

October 5th, rabbit No. 53 dies of paralytic rabies.

October 13th, rabbit No. 52 dies of paralytic rabies.

Dog No. 3.—This dog was carefully examined post-mortem September 18th. There were no lesions in the thoracic or abdominal organs. The brain was slightly congested. It was placed in a sterile jar and brought to the laboratory.

September 19th, rabbits Nos. 50 and 51 were inoculated with a suspension of the dog's brain. Rabbit No. 51 was inoculated subcutaneously; No. 50 beneath the dura.

October 8th, rabbit No. 50 was partially paralyzed. It died during the night. At this writing, November 24th, rabbit No. 51 exhibits the beginning symptoms of rabies.

Cow No. 5.—This cow was in another herd, but it died with symptoms of rabies. The brain was removed by Dr. Ambler and sent to this laboratory. It was received November 29th, late in the afternoon, and put on ice.

September 30th, rabbit No. 54 was inoculated beneath the dura.

October 16th, rabbit partially paralyzed.

October 17th, rabbit paralyzed. It dies during the night.

A second inoculation was made in one case, from rabbit No. 53.

October 9th, rabbit No. 56 was inoculated subdurally with a bit of the brain suspension from rabbit No. 53.

November 19th, rabbit No. 56 was paralyzed.

November 20th, rabbit found dead this morning.

Unfortunately, the brain of the horse was not secured. As it was bitten in the nose, and exhibited the symptoms of rabies, Dr. Ambler's diagnosis was undoubtedly correct.

The loss caused by this outbreak was about ten pet dogs, five of which were rabid, five cows and a horse. To this must be added the cost of the investigation and the expense of one Pasteur treatment. It is not known that this is all, for other animals in more distant herds may have been bitten unknown to their owners and their death attributed to other causes. Whether this was true or not, the people of that community paid a good price for the privilege of allowing dogs to run the streets without muzzles.

Description of Plates.

I am indebted to Prof. S. H. Gage and to Mr. R. C. Reed for the photographs of the colonies of the anthrax bacilli.

Plate VI. Anthrax colonies. 1. Photograph, natural size, of an agar plate culture of anthrax bacilli five days old. It shows the size and character of the surface colonies especially well. 2. This is a photograph of a small area of an agar plate under slight magnification; culture thirty-four hours old, containing many colonies, mostly within the medium. It shows the variety of forms taken on by the deep colonies.

Plate VII. Anthrax colony. 1. A photograph of a young thirty-four hour surface colony on an agar plate. Slightly magnified showing the filamentous ramifications of the growth. 2. A photograph, under a much higher power, of a portion of the edge of the same colony, showing the wavy course of the bundles of filaments and also the loops of filaments at the extreme margin of the colony.

Plate VIII. Anthrax bacilli. 1. Bacilli from a young bouillon culture. 2. Bacilli containing spores, also free spores drawn from a preparation made from a colony on an agar plate culture seven days old. 3. A drawing from a cover-glass preparation from the spleen of a cow which died of anthrax. It shows the bacilli with an apparant capsule surrounding them. Bacilli magnified about 1,000 diameters.

A Report Concerning the Nature of Infectious Swine Diseases in the State of New York, with Practical Suggestions for their Prevention and Treatment.

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In the State of New York, as elsewhere in this country, the infectious swine diseases which are of the greatest economic importance are hog cholera and swine plague. A third infectious disease peculiar to this species known as swine erysipelas in England, *rouget* in France and *Rothlauf* in Germany has not become prevalent in this country, although its probable appearance in one of the western States has been announced.

In addition to the above, swine are subject to several diseases common to other animals and to man. Outbreaks of anthrax occasionally occur in which many animals perish. Tuberculosis is not infrequently found in pigs fed upon the milk or offal of tuberculous cattle. Hogs are sometimes bitten by rabid dogs and die of rabies. There are also several animal parasites which infest swine; some of these produce serious losses, while others, like trichinæ render their hosts dangerous for human consumption. It has further been observed that swine are susceptible to small-pox and diphtheria, but cases of these are of very rare occurrence. Many hogs die from the effect of improper care but these fatalities are generally heralded as being due to some one or other of the infectious or contagious diseases. These various affections are of much importance and every precaution should be taken to prevent them, and all known means employed to eradicate them, if they should appear. The scope of this report, however, will not permit of their further discussion and we pass at once to the consideration of the two diseases first mentioned and to those disorders brought about by unsanitary surroundings and unwholesome food.

Although hog cholera and swine plague have been carefully described in the official reports of the Bureau of Animal Industry, United States Department of Agriculture, and the distinctive characters of each have repeatedly been pointed out in various other publications, the investigation of the last year has shown that there are many farmers who are not sufficiently familiar with the nature of these maladies properly to guard their herds against them. As swine diseases are among those of the highest economic importance, as measured by the market value of the animals they destroy, it is fitting that they should again receive special attention. For the convenience of the reader, it has seemed best to divide the subject matter of this report into four parts as follows:

I. A somewhat popular discussion of hog cholera and swine plague, based upon the facts taken largely from descriptions already published and which are familiar to investigators in this line. This part is intended primarily for those who are not already familiar with the nature of these diseases.

II. A test of the swine plague "antitoxin" or serum prepared by the United States Bureau of Animal Industry for the treatment of swine plague.

III. A report of the investigations which have been made during the past year into the nature of the outbreaks of infectious diseases among swine in this State.

IV. A description of the bacilli of hog cholera and swine plague based upon the study of these organisms obtained from the epizoötics in this State.

I.

HOG CHOLERA.

Historical sketch.—The earliest outbreak in this country of which we have knowledge of a disease supposed to be hog cholera occurred in the State of Ohio in 1833. It is presumed that it was brought from Europe with some of the animals imported from there to improve the American breed of swine. After being introduced, it spread at first slowly, but later with increasing rapidity along the lines of commerce, until it has invaded every part of this country where swine raising has become an industry. It has been shown by investigators in England, on the continent of Europe, and in the United States Bureau of Animal Industry, that the swine fever of Great Britain and the swine pest of Denmark, are identical with American hog cholera.

In 1875, Prof. James Law* published a paper on his investigations of hog cholera or "intestinal fever in swine," in which we find the lesions carefully described and the following list of names under which the disease was then known, viz.: Typhoid fever, enteric fever, typhus carbuncular fever, carbuncular gastro-enteritis, carbuncular typhus, pig distemper, blue sickness, blue disease, purples, red soldier, anthrax fever, scarlatina, measles, diphtheria and erysipelas. Some of these names are still used. Recently my attention was called to a popular work on swine diseases in which many of these terms are employed. They are of popular origin and seem to refer to some one or more of the observed symptoms. The fact should not be overlooked that formerly all the apparently infectious diseases of swine were generally thought to be identical. Unfortunately, in many places, this opinion seems to be still entertained.

In 1885, the bacillus, or causal agent, of this disease was discovered and described by the workers in the United States Bureau of Animal Industry.†

This important discovery swept away many of the existing theories concerning the nature of hog cholera. It established the all important fact that it was a definite disease produced by a distinct species of bacteria. Subsequent investigations have shown that the spread of this disease and likewise its prevention are governed almost entirely by the conditions or agencies which favor or check the spread of this particular species of bacteria. It has been clearly established, therefore, that hog cholera is an infectious disease. Its specific organism is easily carried from an infected to a non-infected locality rendering the spread of this malady exceedingly easy, but still we believe largely within the power of man to control.

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* Report of the United States Commissioner of Agriculture, 1875.

† Annual report of the Bureau of Animal Industry, United States Department of Agriculture, 1885. Special report on hog cholera, *ibid.* 1889. Bulletin No. 6, *ibid.* 1894.

Symptoms.—There seems to be a popular, traditional belief that the nature of a disease should be determined by the objective symptoms. Such a belief is nearly fulfilled in case of certain affections, but years of investigation have shown that with the one in question, it is not wholly true. This is unfortunate, but the best informed writers on the subject are agreed that hog cholera can not, with rare exceptions, be positively diagnosed by the symptoms. Animals suffering from various intestinal troubles frequently exhibit symptoms which very closely resemble those of hog cholera.

There are two recognizable forms of this disease, namely, the acute and the chronic or mild form. In the acute disease, the animals die very suddenly after a few hours', or at most a few days' sickness. In the other form the disease runs a longer course. There is usually a rise in the temperature of from 1 to 3° F.

The sick animals act dumpish, spiritless, and lie quietly in a corner or huddle together usually concealing the head in the litter. They refuse to move when disturbed and are more or less oblivious to their suffering. The appetite varies. In acute cases the animals may eat quite heartily up to within a few hours before death. In more chronic forms they eat fairly well until the end. There may or may not be diarrhoea. Frequently the bowels are costive. It is quite common in these cases to have an active diarrhoea during the last few days. The color of the discharge depends largely on the food. Vomiting rarely occurs. The changes in the respiration and the pulse are difficult to determine. There is rarely any cough. Frequently there is considerable reddening of the skin on the nose, ears, abdomen and on the inside of the thighs and pubic region. The redness is diffused and more intense as death approaches, and frequently apparent in the dead animal. In some cases there is a discharge from the eyes. In the chronic form the animal becomes emaciated. These symptoms vary to such an extent that it is sometimes necessary to make a post-mortem examination, and even then the diagnosis must often be delayed until the results of the bacteriological examination are obtained.

Morbid anatomy, or the appearance of the diseased organs.—Hog cholera is a disease of the intestinal tract, although the lungs may occasionally contain areas of lobular or broncho-pneumonia. In the acute form the lesions are of a congestive or hemorrhagic nature. The lungs and heart may be sprinkled with bright reddish areas due to hemorrhages beneath the membrane covering these organs. The spleen is enlarged and the color much darker than normal. (See Fig. B. Plate II.) The kidneys are enlarged and usually their surface is of a dark color, due to the injection of the blood vessels. Frequently the intestines will contain blood clots. In some cases the hemorrhages are confined to areas beneath the mucous membrane of the stomach, especially in the fundus, but ordinarily the large and small intestines are also affected. In the chronic or less severe forms, which appear to be more common, the lesions are quite different. The spleen is very much enlarged, firm and dark colored. The lymphatic glands are enlarged and œdematous or hemorrhagic. In the cæcum and upper part of the large intestine, and frequently in the lower portion of the small intestine, there are numerous ulcers. These are usually circular, slightly projecting masses of dead tissue, varying in color, but usually grayish yellow or blackish, or both, in alternate rings. They are readily recognized, and when associated with the large blackish spleen, the disease is almost always hog cholera. In some cases, instead of the isolated ulcers, the entire surface of the mucous membrane will be necrosed (dead), giving it a grayish or yellowish appearance.

Hog cholera is usually fatal and when it appears in a herd a large percentage of the animals are liable to be attacked unless rigid precautions are taken to prevent its spread. What these precautions consist in will be discussed on a subsequent page.

Although certain of the tissue changes appearing in hog cholera are simulated by other disorders, a careful post-mortem examination will, in most cases, enable the diagnosis to be made unless the disease is masked by various modifications or complications. In all cases the farmer should make, or have made, a careful post-mortem examination of any swine which may die, for the purpose of determining the nature of the affection. The common practice of allowing the dead animals to be buried without first ascertaining the cause of death should be discouraged. This has frequently caused the destruction of an entire herd from the disease, when, if properly handled at the beginning, a large proportion of the animals might have been saved.

The cause of hog cholera.—As previously stated this disease is due to the presence of a certain species of bacteria.* Without its presence, hog cholera is impossible. This organism is very small. It is rod-shaped yet more than 15,000 of them could be placed end to end within the length of a single inch. They will live in water for several weeks and thus they are often carried from place to place in small streams. On account of their minuteness and their power to resist such natural agencies as moisture and dryness together with their ability to live for several months in the soil, it requires the greatest care to keep them off from one's premises, if they are present in adjoining herds. It seems to be difficult for people to realize that the exciting and only cause of this disease is a living organism invisible to the unaided eye. Let this fact be fully appreciated and the precautions about to be enumerated will be easily understood.

Prevention.—As hog cholera is caused by a specific organism the first fact to be determined is to find the channel or means by which it can be carried from an infected to a non-infected herd. The thorough investigations which have been made in the United States Bureau of Animal Industry (l. c.), have shed much light on this subject. The observations of more recent years have confirmed the conclusion reached in the earlier reports of the Bureau. With these results and the experience of those who have acted on their suggestions, we come to the consideration of the ways by which the virus is disseminated and the methods necessary for checking its spread, with an assurance of certainty that it can be kept away from individual herds even in the midst of wide spread epizoötics.

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* For a full description of this organism see page 607.

1. The virus of hog cholera is frequently introduced into a non-infected locality by the purchase of animals, usually for breeding purposes, from herds in which this disease exists or has existed within the preceding few months. These animals are usually placed among the home raised swine without quarantine thus affording every possible facility for starting up a new outbreak.

How could these animals carry the disease?—we are often asked. The answer is easy. The virus could be carried in the dirt on the animals, or, as is most usually the case, the pigs might have been but recently infected and later they develop the disease. It not infrequently happens that these animals are suffering, when purchased, from a chronic form of the disease, to which they eventually succumb. In purchasing swine, therefore, it is of the greatest importance that the history of the herd should show that it had been free from infectious diseases for at least one year. In addition to this, newly purchased swine should not be placed immediately after shipment in the pens with the home stock, but they should be kept in a separate enclosure until after all danger of the disease has passed.

2. Swine are often shipped in crates, boxes or in open cars, in which hogs affected with hog cholera have previously been confined. The history of hog cholera contains may illustrations of this method of contracting the disease.

3. As already stated, the bacilli of hog cholera live for a considerable time in water. On this account the specific bacteria from outbreaks which start at or near the source of a creek or small river may be carried in the current, and infect animals

which wallow in the stream many miles below. Although the illustrations of this method of infection are so numerous that they seem commonplace, it is the exception to find the swine kept from these possibly infected streams. An extensive outbreak occurred in the eastern part of the State of Illinois some years ago, which furnishes a good example of the significance of this neglect. Some breeding swine were purchased in a hog-cholera district in the State of Nebraska. They were placed in a herd at the very head waters of a small stream. In about two weeks, hog cholera broke out among them and later it appeared in every herd, with one exception, for several miles along the infected stream. The hogs in the herd which escaped were confined in a yard some distance from the infected creek, carefully fed and kept dry, and everybody coming from the infected farms were forbidden to enter. This precaution saved the animals. Such a measure necessitates some work and a slight expense, but these are not to be seriously considered when by so doing the hogs can be marketed instead of lost. In the fall of 1895, I found in the State of Minnesota a few farmers who were adhering to this method and who saved their swine, while the herds of their neighbors were destroyed.

4. The bacilli of hog cholera can be carried in the dirt which adheres to one's shoes or to farming utensils. It not infrequently happens that the virus of this disease is carried from farm to farm on the tools taken from an infected place. It sometimes occurs that a farmer assists his unfortunate neighbor in drawing away or otherwise disposing of the dead or sick hogs and in turn carries the virus on his shoes or implements to his own herd. A very striking example of this came to the writer's attention in 1890. A farmer in Illinois, fearing the infection of his swine from a stream, confined them in two fields on a hill side. One day he assisted a neighbor in drawing out his dead hogs and, when through, left the stone boat which was covered with litter from the dead hogs, in his upper yard in which about sixty fattening hogs nearly ready for the market were kept. In about two weeks they began to die of hog cholera. Then came heavy rains and

about two weeks later the shoats in the lower field began to die of the same disease. He lost 158 of his 160 hogs. Although this man realized the danger of contamination from the stream, he failed to comprehend the fact that he could bring the virus in the way he did.

In the State of Minnesota, there is being carried out a method of individual quarantine which is working to good advantage. The law provides that each farmer may, during the prevalence of infectious diseases among swine in his locality, post a notice warning all people from coming within 50 feet of the pens or yards in which his hogs are kept. The violation of this request is punishable by a heavy fine. If the disease is present then the State health authorities post a notice of warning, forbidding any person, save the owner or the authorized attendants, from going to the pens. These notices enable farmers to keep their herds free from exposure to the virus of the disease through dirt brought by themselves or employes from infected localities.

5. The virus may be carried by buzzards, crows and other birds. There is no positive proof that the virus has been disseminated in this way although there is much evidence to support such a theory, particularly in the South. Several outbreaks have been attributed to this method of introducing the virus. The hypothesis emphasizes the necessity for promptly disposing of the dead animals instead of leaving them as prey for scavengers. If they cannot be burned it is best to cover the bodies with a liberal quantity of lime and bury them.

Thus far we have considered the spread of the disease from herd to herd but it is exceedingly desirable to be able to check its ravages in herds which for any reason have actually become infected. It is obvious that this is a difficult task as all the animals may have been exposed. For this reason it is often impossible to save any of the individuals. It seems to be a fact however, that usually only a few animals in a herd are infected at the beginning, and that the disease spreads from these. Here as in dealing with infectious diseases generally, the principle of isolation is to be observed. If one or more animals are attacked, they should be separated from the apparently well ones. The as yet well animals should be placed in other pens, and the infected enclosure disinfected. The well ones should receive the best of care including good and wholesome food, pure water, a little salt, and if the animals are kept in a building it should be well ventilated. A laxative is also indicated. Dr. D. E. Salmon* recommends the following treatment for both prophylactic and curative purposes. It is reported to be more efficacious than any of the medicinal remedies previously tried. The formula for the preparation is as follows:

Wood charcoal	1 pound
Sulphur	1 pound
Sodium chloride	2 pounds
Sodium carbonate	2 pounds
Sodium hyposulphite	2 pounds
Sodium sulphate	1 pound
Antimony sulphide	1 pound

These ingredients should be completely pulverized and thoroughly mixed. The dose of this mixture is a large tablespoonful for each two hundred pounds weight of hogs to be treated, and it should be given only once a day.†

If any of the animals among those supposed to be uninfected show symptoms of the disease, the well ones should again be removed to other pens. It is important that the pens should be kept dry. If board floors are used they should be cleaned frequently and suitable bedding provided. If floors are not

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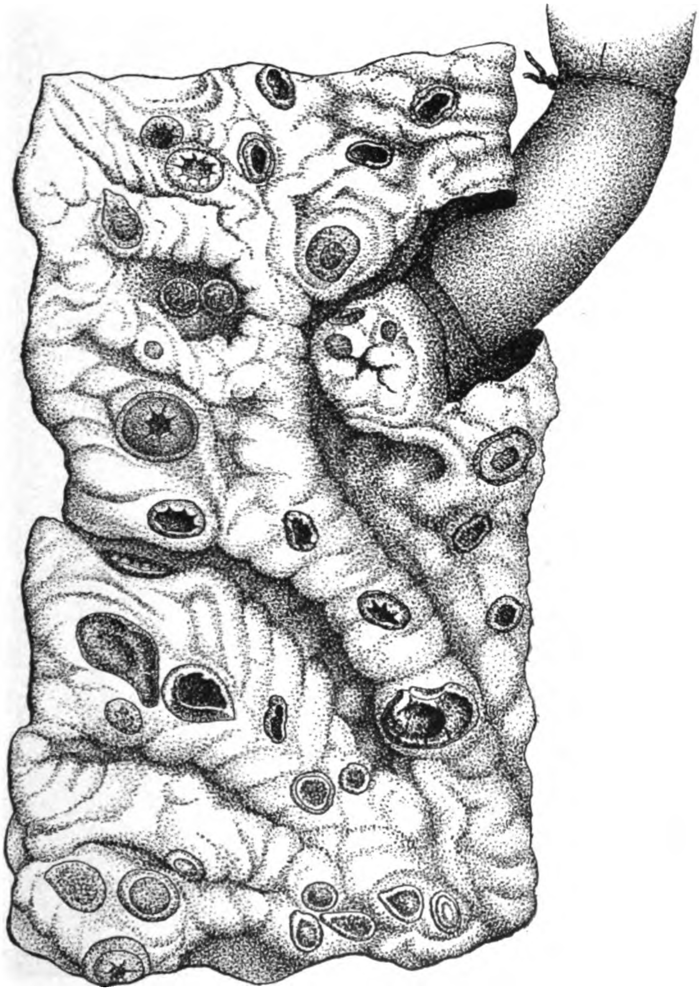
* Farmers' Bulletin No. 24, United States Department of Agriculture.

† Concerning this treatment the bulletin reads:

"When hogs are affected with this disease they should have at least once a day soft food, made by mixing bran or middlings and corn meal, or ground oats and corn, or crushed wheat with hot water, and stirring into this the proper quantity of the medicine. Hogs are fond of it; it increases their appetite, and when they once taste of food with which it has been mixed, they will eat it, although nothing else would tempt them.

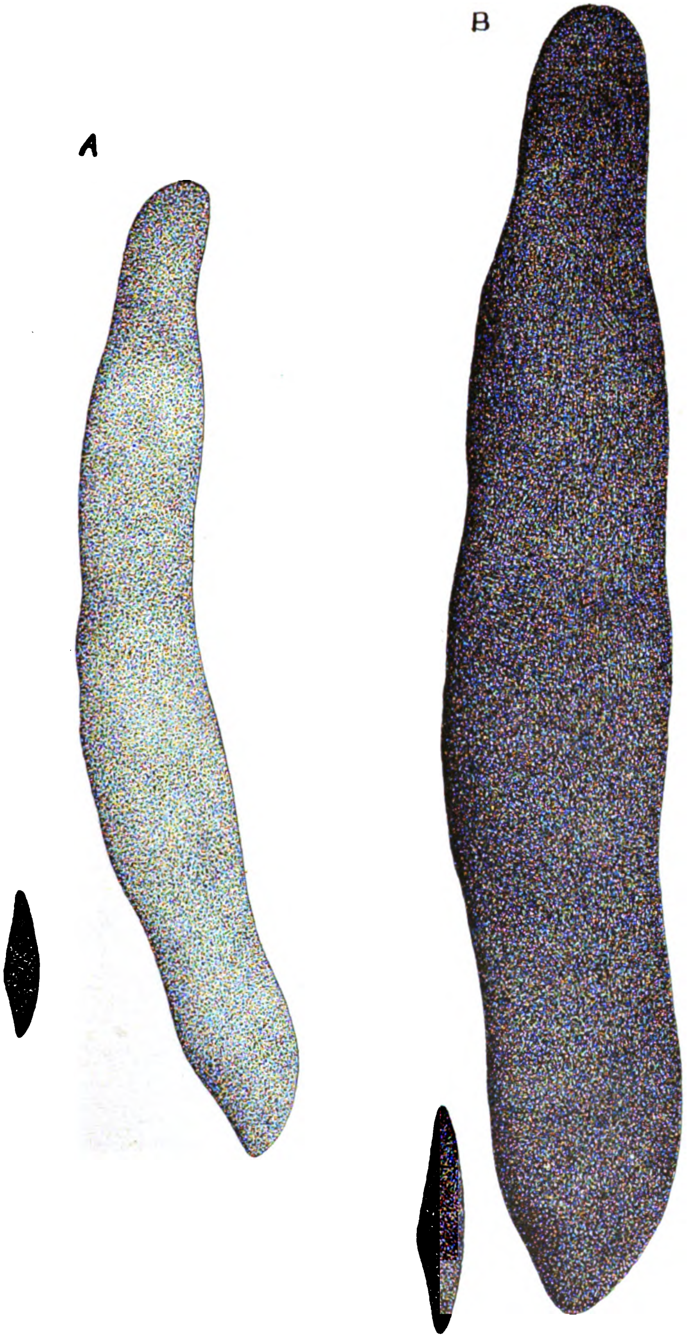
"This medicine may also be used as a preventive, and for this purpose should be put in the feed of the whole herd. Care should of course be taken to see that each animal receives its proper share. In cases where it has been given a fair trial, it has apparently cured most of the animals which were sick and stopped the progress of the disease in the herd. It also appears to be an excellent appetizer and stimulant of the processes of digestion and assimilation, and when given to unthrifty hogs, it increases the appetite and causes them to take on flesh, and assume a thrifty appearance."

PLATE I.



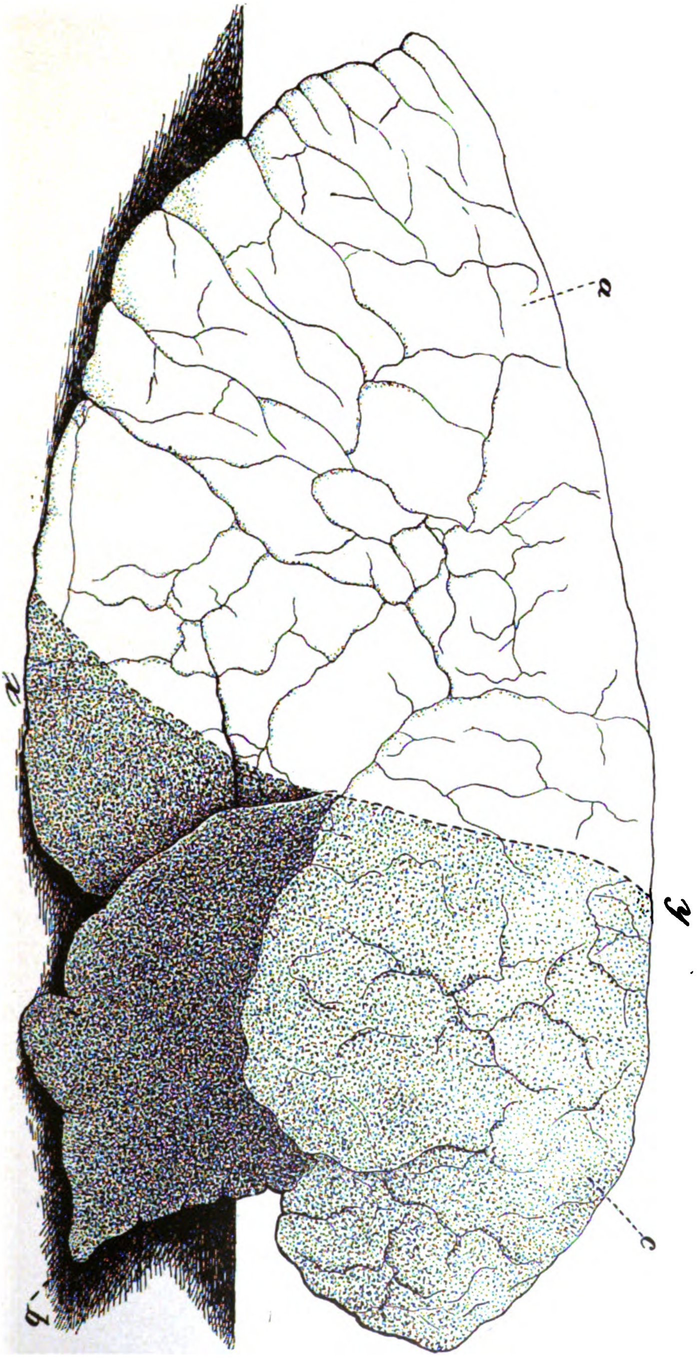
ULCERATED CAECUM—HOG CHOLERA.

PLATE II.



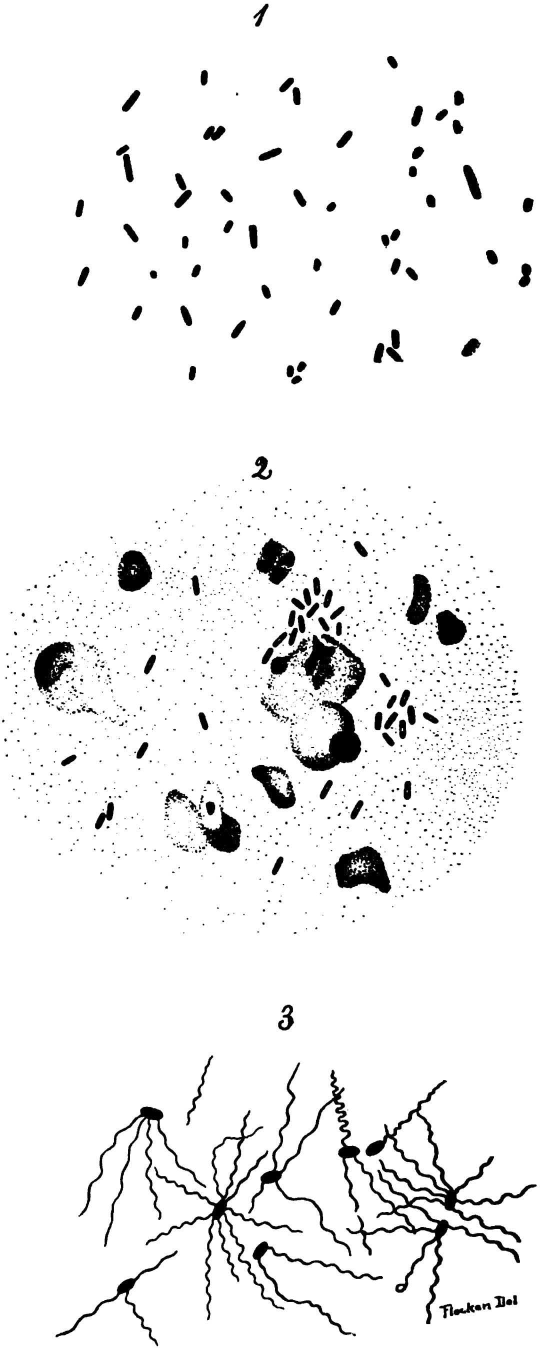
Normal and Diseased Spleens—Hog Cholera.

PLATE III.



SWINE PLAGUE LUNG.

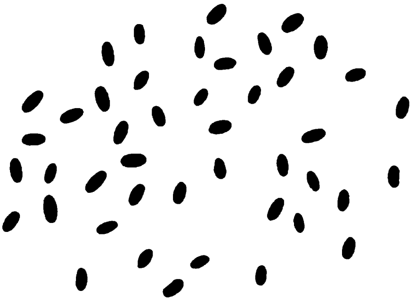
PLATE IV.



Hog Cholera Bacteria.

PLATE V.

1



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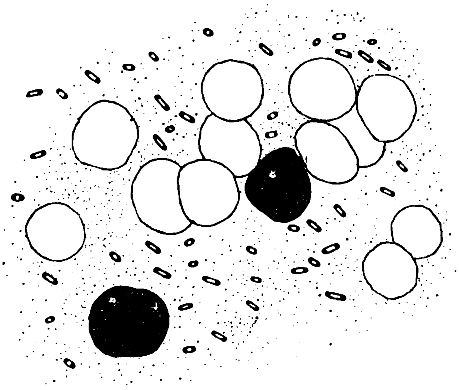

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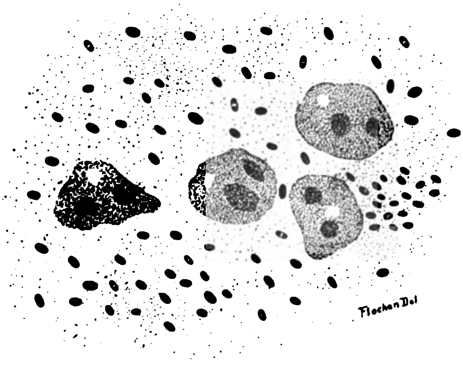
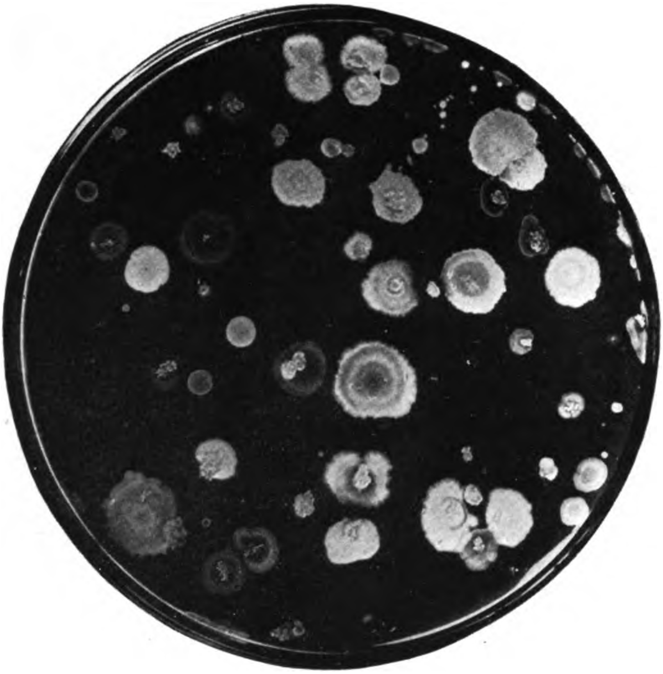


Swine Plague Bacteria.

PLATE VI.

1



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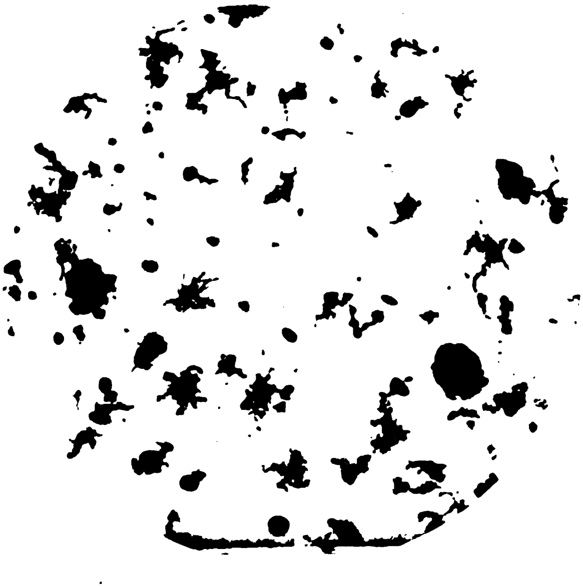
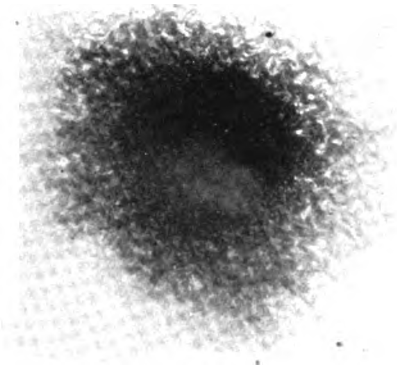


Colonies of Anthrax Bacteria.

PLATE VII.

1



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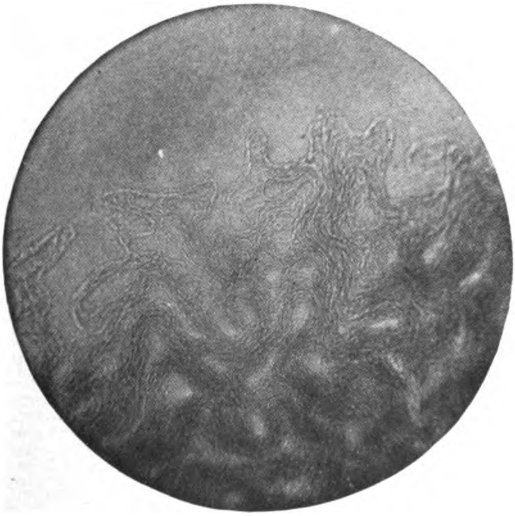
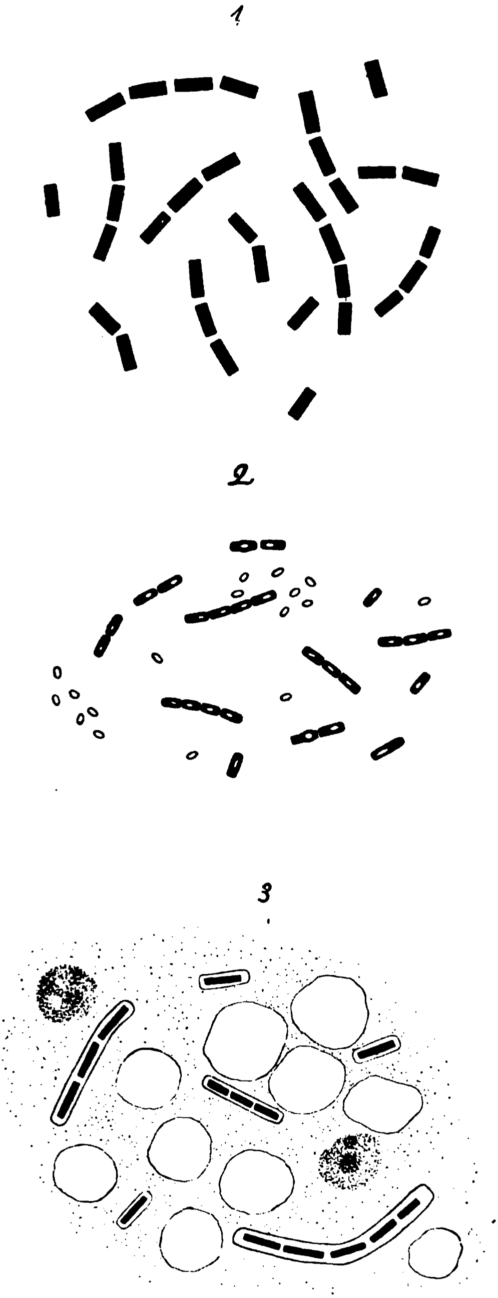


Colony of Anthrax Bacteria.

PLATE VIII.



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ANTHRAX BACTERIA.

used, dry ground should be selected and the inclosure should be changed from time to time. There is invariably enough organic matter in the water which collects in hog pens to provide pabulum for the hog-cholera bacteria. In other words the swine should be isolated and the virus of the disease kept from them. As this disease is very similar to typhoid fever in man, the same general care should be exercised in warding it off that is employed in preventing the spread of that disease. The expense of the precautionary measures is comparatively slight, a mere trifle, compared with the loss from the disease, and it can therefore well be afforded.

If the post-mortem of the first animals to die show that the diagnosis of hog cholera is correct, it is recommended by some that all sick animals should be killed and their carcasses burned. There is logic in this method of treatment, as the mortality of hogs attacked with this disease is exceedingly high, and, if the individuals affected survive, they rarely become thrifty. Their destruction removes a source of infection and increases the prospect of checking the spread of the disease. Although this method has much to commend it, especially in the outbreaks where the disease in neighboring herds has run a rapidly fatal course, care in separating the well from the sick will often save several animals.

As the bacillus of hog cholera lives in the soil for several months, it is important that other swine are not brought to the infected place, before the virus has been destroyed. In cases where the sick animals are confined in pens or small inclosures, disinfectants may be used. Of these the following solution is effective. It is quite corrosive and care should be taken to protect the eyes and the hands from accidental splashing:

Crude carbolic acid	½ gallon.
Crude sulphuric acid	½ gallon.

These two substances should be mixed in tubs or glass vessels. The sulphuric acid is very slowly added to the carbolic acid. During the mixing a large amount of heat is developed.

The disinfecting power is heightened if the amount of heat is kept down by placing the tub or demijohn containing the carbolic acid in cold water, while the sulphuric acid is being added. The resulting mixture is added to water in the ratio of 1 to 20. One gallon of mixed acid will thus furnish 20 gallons of a strong disinfecting solution, having a slightly milky appearance. The mixture should be applied to the walls and floors of the pens, saturating them with it. Slacked lime would be less expensive for yards.

When the diseased animals have had a wide range it is best to allow the virus to become destroyed through natural agencies. It is not considered safe to reoccupy the land with swine within a year after the disease disappears. The writer has been told of several epizoötics among newly purchased swine placed in yards or fields in which animals have but recently died.

Treatment.— Naturally one looks for a remedy when the disease appears. It might seem unjust that the penalty of allowing the virus to enter must be the loss of a large part of the herd. However, this is usually the case. Nature as we find her is not relenting, and when this virus is introduced, there is, according to past experience, little or no help to be obtained from drugs. Various medicines have been tried but thus far, they have not proved to be efficient. With this, as with other infectious animal diseases, the best treatment is to be found in their prevention.

During the past few years much has been said concerning preventive inoculation and more recently the serum treatment has received much attention. While there is hope that an antitoxin or other specific may be discovered, up to the present time these new remedies have not passed beyond the experimental stage, and one should be guarded against the purchase or use of any of these "sure cures" for hog cholera now on the market.

The United States Bureau of Animal Industry and also the investigators in some of the State experiment stations have been and are still making extensive investigations in these lines, but as yet the desired results have not been fully attained. Farmers should not be hasty, therefore, in accepting these "new remedies" until they have a guarantee of their efficiency, at least in an experimental way. Again, the investigators who are searching for a specific for this disease, should not be blamed if they do not succeed at once. It is not yet known whether such a discovery is vouchsafed unto man. Certainly great benefit has accrued from the investigations already made. They have told us the cause, and pointed out the means by which it is possible, at least in a large majority of instances, to prevent the disease. It is highly probable that if we can have but one, a knowledge of the cause with the power to prevent can be made of more real value to the country at large than a medicinal remedy could possibly be.

Economic importance.—The economic importance of hog cholera (in which are necessarily included, on account of confusion in diagnosis, swine plague and dietary disorders) is much greater than is commonly supposed. According to the official reports of the United States Department of Agriculture, the loss of swine in this country from diseases, largely hog cholera, amounted in 1896 to 5,440,168 animals, or 12.7 per cent. of the entire number of hogs in the country. In 1896 the value of the swine in this State was estimated at $4,193,897. A loss of 12 per cent., the average loss for the country, would amount to more than half a million dollars. Already this disease has many foci in the State, and during the last year several outbreaks have occurred, in which the losses in the herds affected ranged from 40 to 90 per cent. Notwithstanding this, and contrary to certain rumors, hog cholera has not become a serious pest to the farmers of this State. However, if the natural history of this disease is carefully read, the conclusion must be reached that unless care is taken to prevent its spread, it may in a very few years become a wide-spread and destructive plague. Certainly the gravity of the situation should cause those who are personally interested to be cautious. If all keepers of swine would see to it that every reasonable precaution is taken to prevent the entrance of the virus into their herds, and see that proper quarantine is enforced against all swine coming into the State from infected districts, hog cholera could undoubtedly soon be eliminated from within our boundaries. The situation is such that it is far more profitable to go to some trouble and expense to prevent the disease than to wait until it occurs and then try some supposed remedy.

It should be said further that the loss of the animals does not measure fully the cost of the disease. It frequently happens that the carelessness of a single man may permit the entrance of the disease into a locality from whence it spreads and often destroys the animals of those who are dependent upon the price of their "porkers" for the purchase of suitable clothing and necessary food. Such occurrences are not uncommon, and to prevent extreme suffering these people become temporarily public charges. It is a well-established fact in sanitary science that the health and prosperity of the people of a community depend largely upon the health of the domesticated animals in that community and upon which the inhabitants largely depend.

SWINE PLAGUE.

The term swine plague, like that of hog cholera, has been used indiscriminately to designate destructive diseases among swine. Swine plague, however, is primarily a disease of the lungs, although it may affect the other organs of the body. It is an infectious pneumonia. The difference between these two swine diseases may perhaps be made more distinct by comparing them to well-known human diseases. Thus the swine plague can be likened to pneumonia in man, and hog cholera to typhoid fever.

Swine plague was differentiated from hog cholera by Dr. Theobald Smith* in 1886. Up to that time it was unknown in this country, although a like disease, *Schweineseuche*, had been described in Germany. In addition to the difference in both the location and nature of the primary lesions, the bacteria which cause them are entirely different. (See description of hog cholera and swine-plague bacteria on page 617.) Dr. Smith believed swine plague to be a distinct and independent disease, although it was often associated with hog cholera. In fact, he found the two diseases co-existing in the same outbreaks and often in the same animal. Other investigators, more especially Drs. Welch and Clements,* of Baltimore, have found them together so often that they were inclined to believe that swine plague was a secondary affection.

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* Report of the Bureau of Animal Industry, United States Department of Agriculture, 1886.

In 1895 the writer had an opportunity of investigating several outbreaks of swine disease in the State of Minnesota, where he found simple pneumonia, or swine plague, running a rapidly fatal course. These investigations, which cannot be entered into here, support the conclusion of Dr. Smith, that swine plague is an independent disease. During the past year it has been found in this State in two outbreaks in which the characteristic lesions or the bacillus of hog cholera were not discovered. In the examination of a dead hog the provisional diagnosis of swine plague may be ventured on the following appearances of the organs, viz.: A consolidation of a considerable part of one or both lungs, with the intestines, liver and spleen apparently healthy, although these organs are often more or less affected. If the intestines contain large ulcers and the spleen is very large and the glands of the mesentery are enlarged and œdematous, the disease is very likely hog cholera. If all these tissue changes are found in one and the same animal it is presumable that both diseases are present.

Symptoms.— It is frequently difficult to recognize symptoms distinctive of swine plague. The peculiarities of swine render it exceedingly difficult to obtain evidence on physical examination of lung disease. Sometimes this affection runs a very rapid course but usually it is more protracted, lasting from a few days to a week or more. The affected animals eat very little, or refuse food altogether. They cough considerably especially when forced to run. The back is usually arched and the groins sunken. The whites of the eyes are reddened. The skin over the under surface of the body, nose and ears is frequently flushed. The cough, however, is the most reliable indication we have of swine plague, but in some cases of hog cholera the coexistence of broncho-pneumonia also causes the animal to cough when forced to move rapidly.

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* Special report on swine plague, Bureau of Animal Industry, 1891.

Morbid anatomy, or the appearance of the diseased organs.—Like hog cholera there are many known variations in the appearance of the internal organs of hogs which have died of swine plague. The characteristic lesions are, as previously stated, to be found in the lungs. Frequently the abdominal viscera appear to be normal although a careful examination will usually reveal slight changes. In the lungs, however, the disease is obvious. The delicate, light pinkish appearance of the normal organ is changed. The ventral and cephalic lobes and often a part of the principal lobe of one or both lungs have become solid. They are reddish, mottled or grayish according to the stage of the disease. The pleural cavity frequently contains a blood-stained or straw-colored liquid and the surface of the lung is sometimes covered with a grayish exudate which occasionally attaches the lungs to the wall of the cavity. In some cases there are obvious changes in the intestines, kidneys, spleen and liver. The extent to which these organs may be affected is not fully determined. In cases where the variations are marked, it is impossible, even for experts, to make a diagnosis without a careful bacteriological examination. It is believed by the writer that swine plague may appear as a septicæmia in pigs, resembling very closely anatomically the acute form of hog cholera. If the disease exists in a modified form the assistance of a veterinarian will be necessary in making the diagnosis. It is not too much to expect that all those who raise swine should be able to determine whether or not the changes characteristic of the typical forms of this disease are present. An early diagnosis and prompt preventive measures will often save serious loss; hence the desirability of having the farmer able to take the initiative steps in preventing its further spread.

The cause of swine plague.— Dr. Theobald Smith* discovered in 1886 that this disease was due to a small non-motile bacillus.

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* Paper read before the International Veterinary Association, Chicago, 1893.

It differs radically in both its morphology and cultural characters from the bacillus of hog cholera. Although there has been considerable confusion concerning these two species, it is safe to say, as will be seen from their description on page 613, that they can be easily distinguished the one from the other. Dr. Smith also found that an organism closely related to, if not identical with, the bacillus of swine plague, exists in the upper air passages of a large percentage of healthy swine. It is interesting to know that similar bacteria live in the mouth and trachea of many cattle, cats and dogs. Surgeon-General G. M. Sternberg, as early as 1881, showed that in human saliva there is a bacillus which is supposed to be identical with that of pneumonia in man.

The discovery of this bacillus in the upper air passages of healthy pigs is of much importance as it explains the presence of the bacillus in isolated or sporadic cases of pneumonia. The history of swine plague indicates, however, that in outbreaks of the disease the specific organisms are transmitted from animal to animal. It is still an unsettled question whether or not in the beginning of an epizoötic, the disease starts from a sporadic case, that is, one which developed from the normally present organism under certain favorable conditions, or, from an infection following previous exposure to the disease. An argument in favor of the infectiousness of the disease rests in the fact that the mortality in herds affected with epizoötic swine plague is much higher than the percentage of swine which have been found normally to harbor the identical or closely related species of bacteria in their air passages.

At present we must consider epizoötics of swine plague to be due to an infection with the specific organism (the bacillus of swine plague), as its clinical history shows it to be an infectious disease which often becomes widespread.

In the sporadic cases the conditions under which the animal was kept must be taken into account. While in a measure distinct, the possible relation between the sporadic and epizoötic forms of pneumonia appear to be close and dependent to a certain degree upon purely external conditions. This emphasizes the importance of keeping swine in the best possible sanitary conditions. The investigations which have been made into a few epizoötics seem to indicate that the disease sometimes starts in a sporadic case from which it spreads to the other animals in the herd.

Prevention of swine plague.—Recent investigations in Minnesota and Illinois show that outbreaks of swine plague are much more extensive than heretofore supposed. The present knowledge of this disease indicates, therefore, that the adoption of measures for its prevention is quite as important as for hog cholera. In general the measures to be adopted and followed, and the rules to be observed in the prevention of epizoötic swine plague are practically the same as those for the prevention of hog cholera. It will be seen from the comparison of the two species of bacteria that the bacillus of hog cholera is a more hardy organism than that of swine plague. Thus the swine-plague bacillus is destroyed more rapidly by drying and will live a much shorter time in the soil. However, the channels through which it may gain access to a herd are practically the same, and every precaution suggested in reference to hog cholera, is applicable to swine plague. It is believed that the time during which a field, hog-yard, or pen should be kept free from swine after the appearance of the disease can, with safety, be shorter after swine plague than after hog cholera. In any case several months should elapse before the yards or pens are re-occupied.

Treatment of swine plague.—A discussion of the disease would not be complete or satisfactory to the practical mind unless a method of treatment is prescribed. The discovery of an efficient remedy would unquestionably increase the prospects and raise the hopes of many hog-raisers. At present, quacks flood the infected districts with their "curative wares" without giving evidence of the virtue of their drugs.

For a number of years investigations have been almost constantly under way in the United States Bureau of Animal Industry, for the purpose of finding some method by which this disease could be successfully treated when introduced into a herd. Drugs and medicines have been tried, preventive inoculations and injections of toxines have been made. The serum therapy which has afforded relief in other diseases is now being tested with somewhat favorable results, yet we are compelled to say that a specific has not been demonstrated. In view of this unfortunate fact, it becomes necessary to apply with renewed zeal our present knowledge of the nature of the malady and endeavor to prevent its occurrence or reappearance by keeping the animals under the best possible conditions. Prevention of the disease is the key to success. We hear about sterilized milk and testing cows for tuberculosis, not that these will cure, but that they will give information which can be used in such a way that it will minimize the further spread of the disease. So with swine plague. Let every farmer quarantine his swine against all possible sources of infection; keep his animals clean, and supply them with plenty of good food and water and there is reason to believe that he will have little or no occasion to use medicinal remedies.

DIETARY AND FILTH DISORDERS.

It is the experience of those who are engaged in the investigation of infectious diseases to find destructive outbreaks of a peculiar nature among swine kept in filthy pens and yards and also among those fed upon garbage collected in our villages and small cities. A study of the animals which die in these outbreaks shows frequently that the disease is not hog cholera or swine plague, as reported, for neither the changes in the tissue nor the results of the bacteriological examination confirm such a diagnosis. It has already been pointed out that in order to have these infectious diseases, the specific bacteria which produce them must be present, and usually they can be easily detected. The causes of death which occur among swine kept under these unsanitary conditions are spoken of as dietary or filthy disorders. Although the cause of these deaths is usually attributed to hog cholera, the atypical character of the lesions are enough to show the error in this diagnosis.

From the fact that as yet the specific cause of death among these garbage or swill fed hogs has not been definitely pointed out, the opinion is commonly entertained by the people who feed such material and who frequently keep these animals in a disgustingly filthy condition that the cause of death is some contagious disease. By this means they endeavor, consciously or otherwise, to shift the responsibility for the loss which they have sustained.

It is an unhappy fact that many of these people honestly think that "anything is good enough for a hog," and it is hard for them to conceive that unwholesome food and excessively filthy surroundings could lead to fatal results. But it is a significant fact that in this State the great majority of deaths among swine are among the poorly kept and usually garbage-fed animals and ordinarily the cause of death is not, so far as has been learned, a bacterial disease. The investigations which we have made during the past summer show that very probably one of the causes of death among animals fed on the slops (including dishwater) from hotels and boarding-houses is poisoning by carbonate of soda (washing soda) which comes from the powdered soaps now used so extensively in the kitchen. At least it has been found that it requires a less quantity of powdered soap in the food to kill pigs experimentally than is used in many public and even private houses for cleaning dishes. The heavy losses sustained from deaths among swill-fed hogs, together with the unwholesomeness of garbage as animal food, suggests the desirability of discontinuing the practice of collecting kitchen slops for this purpose. In the State of Minnesota I am told there is a law forbidding it. The use of table refuse and waste bits of vegetables can undoubtedly be used with safety if they are fed while fresh and sweet. Certainly pure water is much more desirable for drinking purposes, even for swine, than dish water. For a further discussion of this subject the reader is referred to Bulletin No. 141 of the Cornell University Agricultural Experiment Station, 1897.

II.

SERUM THERAPY IN INFECTIOUS SWINE DISEASES.

As methods for the production of immunity have not, after years of the most untiring and careful investigation, reached a practical basis, attention has been directed to the treatment of these diseases with the blood serum from immunized animals. The successes which have been obtained with the diphtheria and tetanus antitoxines suggested that perhaps similar results might be realized with the swine diseases, and already there has been much activity exhibited in exploiting the possibilities of this new field. Many of the efforts appear to have been fruitless, but others are giving promise of success. The fact should not be lost sight of that in these diseases, more, perhaps, than in any others, there are complications by way of mixed infection, and the effect of unwholesome food and bad environment, which may materially interfere with the neutralizing action and final result of the antitoxin.

Lorenz* seems to have been the first to use serum therapy on swine with success. He worked, however, with *rouget*. After immunizing guinea-pigs and rabbits against this disease, he used their blood to immunize swine. This being successful he used their blood in immunizing other swine. The method is reported to be fairly satisfactory.

In the fall of 1896, two papers on serum therapy in American swine diseases appeared which indicate that at least some of the difficulties heretofore experienced in the direct use of the bacterial products are being overcome. The first of these was by Dr. E. A. de Schweinitz† of the Bureau of Animal Industry, United States Department of Agriculture. He used antitoxin serum which was prepared by repeatedly inoculating a cow. With the blood serum of this animal positive and constant results were obtained in guinea pigs. The quantity of antitoxin required was 6 c. c. per pound weight of guinea pig. We are promised in the paper a full account of this and other experiments in this line.

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* Deutsche Zeitschrift für Thiermedicin, Bd. XX.

† Proceedings of the Society for the Promotion of Agricultural Science, 1896, p. 47.

Dr. A. T. Peters* of the Nebraska Experiment Station, presented the other communication at the meeting of the United States Veterinary Medical Association. He inoculated horses with virulent cultures of the hog cholera bacillus, beginning with 5 c. c. and increasing the quantity until 20 c. c. was given at a time without apparent discomfort. After the animal ceased to react to the cultures, a small quantity of the blood was drawn and tested on rabbits after the method used in testing diphtheria antitoxin on guinea pigs. When the horses were sufficiently immunized, their serum was tried on swine. His laboratory experiments show that it took from 8 to 10 c. c. of the undiluted serum to make a hog weighing 150 pounds immune to hog cholera. At the writing of his paper the serum had been tried in about 23 herds reported to be affected with hog cholera. From several of these encouraging results had been obtained.

The criticism on the paper as brought out in the discussion which followed it, is that positive evidence of the accuracy of the diagnosis of the disease in the herds in which the serum was used was not procured. Further, the usual mortality in similarly affected herds which were not treated is omitted. If the disease which he treated in the field was genuine hog cholera, his results are very promising.

Soon after the publication of the last-mentioned papers, Perroncito † announced the discovery of a vaccine for hog cholera. This I am told is a blood product. It has become an article of commerce without having, to my knowledge, its efficiency verified for the disease as it occurs in this country. From the notice and circulars sent out 3 c. c. is the dose, regardless of the age or weight of the animal. In France the sale of serum is authorized by law only after the Academy of Medicine has given its approval to samples and inspected the laboratories where they are made, but the farmers in this country are not similarly protected either by State or national laws.

An experiment with the swine-plague serum prepared by the Bureau of Animal Industry.—In January last, I made at the request of

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* Serum therapy in hog cholera. Proceedings of the United States Veterinary Medical Association, 1896, p. 59.

† Noticed in Recueil de Medecine Vétérinaire, VI (1897), p. 71.

Inspector Quigley an investigation into the nature of an infectious disease which was destroying many swine in a herd near Auburn. As stated by the owner, the herd originally consisted of 72 animals, mostly shoats, a few of which had been purchased in the vicinity and the others raised on the place. They had run together about the farm yards until late in the fall when they were divided into three lots and penned.

In pen No. 1, were put 14 yearling hogs weighing about 250 pounds each.

In pen No. 2, were put 37 black and white shoats weighing about 60 pounds each.

In pen No. 3, were put 21 white shoats weighing about 40 pounds each. Pens Nos. 1 and 2 were in the same building but separated by a tight partition and several feet of floor space. Pen No. 3 was a building by itself standing about 300 feet from the first. The animals were fed on swill obtained from the State prison at Auburn. Late in December the pigs in pen No. 2 began to sicken and die. The symptoms were said to be the refusal of food and a bad cough which developed a few days before death. A little later the older hogs in pen No. 1 were attacked and nine of them died.

At the time of my first visit (January 28th) about 40 animals had died. Those which I found living were in pens as follows:

In pen No. 1, there were five hogs all apparently well.

In pen No. 2, there were four shoats all sick.

In pen No. 3, there were 19 shoats all apparently well.

In pen No. 4, there were two pigs which had been taken from pen No. 2, after the disease had appeared. They were both well.

In pen No. 5, there was one pig which had been taken from pen No. 3, because it looked sick.

The animals, up to this time, had died at the rate of one or two a day after a sickness of from one to three weeks' duration. I found two dead hogs from pen No. 1. They had been dead about ten and twenty-four hours respectively. Just before my arrival one of the pigs from pen No. 2 had been killed by Mr. Quigley in what was thought to be the last stages of the disease and sent to me by express. It was received and examined the following morning. The two old hogs were carefully examined.

The lesions found in both these animals were extensive hepatization of the lungs. The cephalic, ventral, and a portion of the principal or caudal lobes were involved in both animals. In one of them there was extensive pleuritis. The spleens were slightly enlarged and dark-colored. The mesenteric glands were enlarged and hyperæmic, in a few instances the cortex was hemorrhagic. This was especially true with those in the smaller curvature of the stomach. The intestines presented a few areas of hyperæmia but no distinct lesions. Tubes of agar inoculated from the spleen and lungs gave pure cultures of swine-plague bacteria. Rabbits inoculated with pieces of the hepatized lung died of swine plague on the fifth day. Those inoculated with the culture died in a short time.

The small pig did not show any decided lesions. Tubes of media inoculated from its organs either did not develop or they contained impure cultures of saprophytic bacteria.

As the disease appeared to be uncomplicated swine plague, it seemed to be a suitable outbreak in which to try the serum therapy. Prior to this I had been requested by Dr. E. A. de Schweinitz, of the Bureau of Animal Industry, to test this serum if an opportunity arose. While this was by no means the ideal time in the course of the outbreak to begin, it was thought best to try it. Unfortunately only a small quantity of the serum was obtainable at this time.

February 2d, I again visited the outbreak, in company with Mr. Quigley, for the purpose of injecting the serum. We found that no deaths had occurred since our former visit, but that the disease had appeared in pen No. 3, and three of the pigs were very sick. In selecting the animals on which to try the serum, the wishes of the owner were observed. The animals chosen were as follows:

In pen No. 1, two hogs received subcutaneously 24 c. c. each; one hog received subcutaneously 12 c. c.; two hogs were reserved for checks.

In pen No. 2, four pigs received subcutaneously 12 c. c. each.

In pen No. 3, three pigs received subcutaneously 12 c. c. each.

These were sick. They were removed to another pen. In pen No. 5, one pig received subcutaneously 12 c. c. Sick.

February 18th, I again inspected the animals and found three of the treated ones dead. These were: One from pen 2, one from pen 3 and the one in pen 5. These were carefully examined and the lesions were those of swine plague. The lungs were more or less hepatized. The spleens were slightly enlarged and the mesenteric glands were enlarged and œdematous. The intestines were normal in appearance. From two of the animals the swine-plague bacillus was obtained. Cultures were not made from the third, on account of advanced post-mortem changes. The remaining pigs in pen No. 2 were no worse and the other two from pen No. 3 were decidedly better.

February 27th, I found a second pig dead from pen No. 2. The disease had again appeared in pen No. 3 and one animal had died. The post-mortem examination of these two pigs showed extensive lung disease. The intestines were not affected. Rabbits inoculated with bits of lung tissue of the pig from pen 3 died on the sixth day with attenuated swine plague, as shown by extensive pleuritis.

At the request of the owner, more of the serum was obtained, and on March 1st the remaining pigs in pen No. 3 were injected. Since February 27th, two had died, leaving but thirteen still living. More than half of these were coughing. They were all injected subcutaneously in the groin with 12 c. c. each of the swine-plague serum. The two dead pigs were examined and the lesions found to be restricted to the organs of the thoracic cavity.

During the next two weeks five of the pigs treated March 1st, died. They were not examined, as notice of their death was not received until some days later. The other eight remained well or recovered, and subsequently they were reported as being thrifty. I saw them the latter part of April and they looked perfectly well. The two survivors of the first lot of three from this pen recovered rapidly. Some weeks later the two pigs in pen

No. 2 died. None of the hogs in pen No. 1 were attacked after the treatment. They were sold late in March.

To summarize, there were, on February 11th, eleven animals treated, of which six died. Eight of the eleven were obviously sick at the time they were given the serum. Later thirteen animals were injected; of these, eight were sick at the time of treatment; of these thirteen, five died. Of the total of twenty-four treated, eleven died and thirteen survived.

In drawing conclusions from this experiment several facts must be taken into consideration. Although all the animals were not examined, there were enough post-mortems to show that the disease was very probably uncomplicated swine plague. It did not spread, however, to other herds in the locality. At the time the treatment was begun, forty animals had died, so that among the survivors we may have had those possessed of strong resisting power. Again, the virus obtained from the different animals was of the attenuated form, showing that possibly the disease was well-nigh spent at the time the treatment was begun.

On the other hand, the disease among the pigs in pen No. 3 did not appear until just before the treatment. The owner had tried to keep these animals isolated from the others, but in spite of his efforts there was much running by the farm hands from pens 1 and 2 to this one. The perfect recovery of two of the very sick pigs first treated from pen No. 3 is suggestive of a specific action on the part of the serum. Again, all the animals attacked and which were not treated died, while of the twenty-four treated, at least sixteen were obviously sick at the time, and of these at least four recovered. The pigs did not receive the care, either in protection from cold and wet or in their food, that good farm hygiene demands. All things considered, therefore, the results are, if taken at their worst, encouraging. Certainly the investigations along these lines are more promising for the final discovery of a specific for this disease than along any others which have been proposed.

III.

INVESTIGATIONS INTO THE NATURE OF THE DISEASE IN CERTAIN DESTRUCTIVE OUTBREAKS AMONG SWINE.

During the past year a careful and as thorough an investigation as circumstances permitted has been made into the nature of the disease in several quite serious outbreaks among swine. These have been made in part under the auspices of the New York State Veterinary College and in part at the request of Hon. C. A. Wieting, Commissioner of Agriculture.

It is of interest to note that in all the more important outbreaks which are here reported, the disease was popularly called hog cholera. The work which has been done and which from necessity has been somewhat fragmentary and largely diagnostic in nature, has shown that certain of these outbreaks were not due to any known infectious disease. The cause of the deaths seemed to be attributable to the bad hygiene. So long as the owners felt that the trouble was due to a contagious disease, they believed themselves helpless, but when they were shown that the losses were not due to such causes, but probably to local conditions, the "scare" was usually allayed and efforts put forth to correct the evil. When the real nature and local causes of these outbreaks are more fully and correctly understood, there is little doubt that the sanitary and hygienic conditions will be improved, and, as a result, the total amount of loss annually sustained from these causes, will unquestionably be reduced by thousands of dollars.

Emphasis should be placed on the question of diagnosis. It has been pointed out in the first part of this report that to make the diagnosis of hog cholera it is necessary to find certain kinds of tissue changes and the presence of the specific bacteria. If the changes in the organs are not like those described for hog cholera, and if the bacillus of hog cholera cannot be found in the organs of the dead animals, it cannot be affirmed that the disease is hog cholera. The same criterion must be applied to swine plague, anthrax and tuberculosis.

Outbreaks near Rome—(A) *Disease at the Oneida County Home.*—Nov. 17th, 1896, I made, at the request of Dr. Huff, an investigation into the nature of the disease among swine, reported to be both hog cholera and scarlatina, affecting the hogs at the Oneida County Home. Dr. W. H. Kelly, of Albany, and Inspector Quigley, representing the Department of Agriculture, were also present at the examinations. The history, as related by the superintendent, showed that about 70 small pigs, about six weeks old, and 8 fattening hogs had died. There were about 40 fattening hogs and a few shoats still living, and, with few exceptions, apparently in good health. The animals were kept in pens which opened into a yard in which horse manure had been placed in considerable quantity, and in which the offal from several cattle which had been slaughtered for beef had been thrown. The fall rains had left the yard very wet and the offal was badly decomposed. The pens themselves were found to be well kept. Although the yard was not more filthy than it is the custom of many people to permit, and even to think proper for swine, it was not a suitable place for keeping animals of any kind. The food consisted of the table refuse from the house, cooked potatoes and soft corn.

The disease first appeared about two weeks before this, when 35 of the pigs were found dead and a few others sick. As soon as the disease appeared among the old hogs they were, at the suggestion of Dr. Huff, all turned into a grove, with the result that only eight died. The cause of death was thought to be some infectious disease, although, so far as known, there had been no chance of infecting the herd. Hog cholera or swine plague was not known to have existed in the vicinity and new animals had not been introduced. The men in charge had not been off the farm and food liable to have been infected had not been purchased. Owing to the large number of hogs still remaining and in a condition ready for slaughter, it was very desirable to determine, if possible, the nature of the disease. This could only be done by making a careful post-mortem and bacteriologic examination of such animals as were suitable for this purpose. Of these there were but three. Two of them had died the night before and the other was sick at the time. All these were carefully examined.

Post mortem examinations.— Pig No. 1, Berkshire female three months old, weight about forty pounds. Died during the night. Post-mortem held at 9 a. m. Skin on the throat was covered with pink blotches, darker colored blotches nearly covered the skin between the fore legs and over the abdomen and thighs.

Lymphatic glands of the inguinal region, also those in the vicinity of the head, slightly enlarged and oedematous, cortex hemorrhagic. Right lung sprinkled with a few ecchymoses, otherwise normal. The tip of the cephalic lobe of the left lung hepatized; the ventral and principal lobe slightly congested (hypostatic).

Pericardium normal. In the left ventricle of the heart was a small number of blackish clots. Right ventricle contained a larger quantity of post-mortem clots.

Liver somewhat pale. Gall bladder contained a small amount of clear yellowish bile. Spleen dark colored, but not enlarged. On the ental surface there were a few small blood tumors. The left kidney was considerably enlarged, capsule easily removed, cortex sprinkled throughout with a large number of punctiform hemorrhages varying in size from a mere point to 2 mm. in diameter; pyramids normal; pelvis was filled with a dark clot. The right kidney presented the same appearance. The bladder contained about 5 c. c. of blood-stained urine.

The mesenteric glands were slightly enlarged, cortex of many of them hemorrhagic, others very dark colored, showing evidences of older hemorrhages. Stomach glands considerably enlarged and pigmented.

Stomach contained a moderate quantity of partly digested food. There were a few ecchymoses in the mucous membrane near the pyloric orifice. The mucous membrane of the duodenum was pinkish with areas of blood extravasation. The mucosa of the jejunum, apparently normal. The ileum contained a considerable amount of blood-stained mucus, also a few small blood clots. The capillaries of the mucosa were considerably injected. In the lower two feet of the ileum the mucous membrane was covered with a thick layer of blood-stained mucus. The mucous membrane of the caecum and colon contained hemorrhagic areas. Lower colon contained a considerable quantity of semi-liquid feces and earth which were slightly blood stained.

Bacteriologic examination.—Several tubes of agar and gelatin were inoculated with bits of the tissue from the lung, liver, kidney, spleen, mesenteric glands and with the heart blood. Rabbits were inoculated on the following day with pieces of the consolidated lung and lymphatic glands.

The tubes of media inoculated remained clear with a very few exceptions and those contained ordinary saprophytic bacteria. The rabbit remained perfectly well. There was not even visible inflammatory reaction at the place of inoculation. From the various organs which were brought to the laboratory cover-glass preparations were made and stained for bacteria. They did not reveal the presence of micro-organisms.

Pig No. 2. Chester white, eight weeks old, weighing about fifteen pounds, male, had been sick about one week, poor condition. Skin over abdomen, inside of thighs, and over throat, of a pinkish color. Lungs and heart normal, spleen, liver, and kidneys apparently normal. The mucous membrane of the small intestines were slightly reddened. Mesenteric glands enlarged. The fundus of the stomach hyperaemic, no ulcers.

Bacteriologic examination. —Tubes of culture media were inoculated with the blood and bits of various organs. They remained clear. Bacteria could not be found on a microscopic examination in stained cover-glass preparations made from the blood, glands, liver and spleen.

Pig No. 3. Jersey red, about four months old, weighing about seventy-five pounds. It had been sick for two weeks. It refused food, walked with an unsteady gait. No diarrhœa, was killed for examination. Not emaciated. The inguinal glands were considerably enlarged, slightly oedematous, cortex hemorrhagic. Lungs partly collapsed. Left lung contained several small areas of hepatization in the cephalic and ventral lobes. Surface of the entire lung sparsely sprinkled with ecchymoses. The tips of the cephalic and ventral lobes of the right lung were hepatized, less number of ecchymoses than the left lung. The bronchial glands were enlarged and hemorrhagic. The pericardial sac contained about 100 c. c. of clear straw-colored serum. Surface of heart nearly covered with irregular areas of blood extravasations. The liver was firm and sprinkled with bluish areas due to thickening of the capsule. The interlobular tissue was much increased. The spleen was slightly enlarged, darker than normal but the pulp was soft. The left kidney was large, capsule easily removed, pale, cortex rather firm, the medullary portion swollen, the pelvis normal, the stomach and mesenteric glands were enlarged and the cortex deeply reddened. And the mucous membrances of the intestines were normal, and of the stomach pale. Bladder contained about 100 c. c. of clear urine.

A careful bacteriological examination was made of the various organs with negative results. Rabbits were inoculated with bits of the affected lung tissue, kidney and mesenteric glands. These animals remained well.

It is probable from the variety of lesions found in the animals examined and the negative outcome of the bacteriological examinations that the disease was not of a specific bacterial origin. Theoretically there were conditions which might explain the cause of death, but which we were not able to demonstrate. There are reasons other than the negative bacteriologic results, which indicate that this was not hog cholera, but that the deaths were due to local causes. These are:

1. There was no known exposure to the disease and hog cholera had not appeared in the neighborhood.

2. The first indication of disease in the herd was the finding at one time of about 30 dead pigs, and several others sick. All these seemed to have been well the day before. Subsequently very few others were attacked.

3. The other animals which died were sick for various lengths of time.

4. Although all the old hogs were exposed and many of them sick, only eight died, the others recovering rapidly after they were placed in the open field.

5. The disease did not spread from this to other farms.

(B) *Disease among swill-fed hogs.*—At the request of Dr. Huff, we visited the farms of two men residing a few miles outside of Rome who had lost about 40 hogs each, from what they thought was hog cholera. We found that each of these men had quite extensive garbage routes in the city of Rome, and were feeding swill thus collected to their hogs. Unfortunately, at the time of our visit the animals were nearly all dead and badly decomposed so that post-mortem examinations were impossible. The symptoms as related, however, were very irregular and the period of duration of the disease variable. The facts which impressed us were the rotten garbage which was being fed and the disgustingly filthy condition of the pens and yards in which the animals were kept. It is exceedingly unfortunate that a specific disease like hog cholera should be accused of being the cause of death of all animals in herds kept under such conditions and before a careful examination has been made.

The losses in these three outbreaks were not less than 150 animals of which fully eighty hogs were nearly ready for the market. According to the owners, the value of these animals was more than $1,200, and a conservative estimate would be not less than $800. Beside this there was a loss of seventy pigs and shoats.

Outbreak near Oswego.— During the summer and fall of 1896, several outbreaks of disease among swine occurred near Oswego. These were thought, by Dr. Poucher, to be largely due to hog cholera. The outbreaks were for the greater part in the herds fed on garbage and swill collected from hotels and boarding houses in the city. Late in the fall, a disease appeared among the hogs in a herd fed on the garbage collected from a single large boarding house. From this herd the disease spread to several others, causing the loss of many animals. December twentieth, I made, with Dr. W. H. Kelly of Albany, an examination of one of the animals which had died the day before in the last herd affected in the above-mentioned outbreak. The condition found is indicated in the appended post-mortem examination notes.

Post-mortem examination.— Chester white, female, weight about 200 pounds. It was reported to have been sick some days and to have coughed considerably. The skin over the ventral surface of the body was slightly pinkish in color. The mouth and tongue were normal. The left pleural cavity contained about 500 c. c. of blood-stained serum. The left lung was partially collapsed. The cephalic half of the principal lobe was firmly hepatized. The entire right lung was consolidated, it was of a dark reddish color and upon section the interlobular tissue was oedematous. A few of the lobules were hemorrhagic. The bronchioles contained little mucus. There were no adhesions between the lungs and the thoracic walls. The azygos lobe contained a few hepatized lobules. Otherwise it was normal in appearance. The bronchial glands were enlarged, hyperaemic and the pulp abnormally soft. The spleen was enlarged and of a dark color, the kidneys were large, the cortex apparently thickened, and the medullary portion pale. The capsules were easily removed. The left kidney contained several punctiform hemorrhages. The mucous membrane of the caecum and colon was dark colored.

The mucosa of the fundus of the stomach was blackish and on section showed extensive hemorrhages. There were no ulcers. The lymphatic glands, especially those in the smaller curvature of the stomach, were enlarged and dark colored.

Bacteriologic examination.—A number of tubes of agar, gelatin and bouillon were inoculated from the hepatized lung tissue, the heart blood, and from the liver and spleen, with the exception of the gelatin, those inoculated from the blood, liver and spleen and most of those from the lung contained on the following day pure cultures of the swine-plague bacillus. Cover-glass preparations made from the lungs contained swine plague bacteria in large numbers. Very few were found in preparations made from the spleen.

Two rabbits were inoculated with bits of the diseased lung December 22d. They died from swine plague septicaemia, one in 16 and the other in 18 hours.

The microscopic examination of the sections of the pneumonic lung showed in addition to the cellular changes characteristic of the disease large numbers of swine-plague bacilli.

This was an unquestioned case of swine plague or infectious pneumonia. From the history given it is presumable that the other animals in this and adjoining herds had died of pneumonia. As soon as the diagnosis was made the assistant commissioner of agriculture, assisted by Drs. Kelly and Poucher, took active measures to check the spread of the disease. For details concerning the destruction of the remaining animals and quarantine see Dr. Kelly's report.

Outbreak near Auburn.—January 28th, 1897, at the request of Inspector Quigley, I examined, with him, animals in a herd near Auburn, which were dying of a disease thought to be hog cholera. Already about 40 shoats and fattening hogs had died. They were fed on the garbage from the State Prison at Auburn. The examination of two animals showed lesions characteristic of pneumonia or swine plague. Subsequently several others were post-mortemed in this herd, all of which exhibited pneumonic lesions, and from which the swine-plague bacillus was obtained.

As I had been requested by Dr. E. A. de Schweinitz, of the Bureau of Animal Industry, United States Department of Agriculture, to test the swine plague antitoxin which was being prepared by the Bureau, arrangements were made for doing so on this herd. The full report of this experiment, with the further particulars obtained concerning the nature of this disease, were described on pages 588, 589.

An outbreak of a mixed infection of hog cholera and swine plague at Fishkill Landing.—At the request of Dr. H. E. Allison, medical superintendent of the Matteawan State Hospital, at Fishkill Landing, an investigation was begun May 6th, 1897, for the purpose of determining the nature of a destructive disease which had appeared among the hogs on the farm belonging to that institution. The herd consisted of eleven breeding sows, two boars, sixty-two shoats and seventy-six small pigs. Up to this time twenty-one shoats had died.

The hogs were housed in well-kept pens, each of which opened into a good-sized yard. The ground in the yards was dry, with the exception of a few holes, which contained muddy water. The land was rather low. A number of shoats had been turned into a piece of cleared woodland adjoining the field in which the pens were located. In this woodland there were several wet, marshy places. The hogs were fed the table refuse from the hospital. It was carefully sorted and fed while fresh. In preparing the food it was put into a trough, thoroughly mixed with water and considerable wheat bran was added. During the winter the food was cooked before feeding and the kitchen refuse was never kept over from one day to the next.

The disease first appeared about the end of the first week in April, when a few shoats were affected. It gradually extended to others and nearly all those attacked died. They were sick from a few hours to several days. The symptoms were reported by the man in charge of the animals to have been exceedingly variable. Usually there was a cough, and a partial paralysis of the hind limbs. In a few animals the skin over the abdomen was of a pinkish color. Some of the hogs had a diarrhœa; others were constipated. A post-mortem examination was made by the man in charge on a few of the animals which died early in the outbreak. He reported finding the "lungs in a very bad condition." At the time of this visit four animals were carefully examined post-mortem.

Pig No. 1.—Female, two years old, weight about 250 pounds. She had recently given birth to several pigs. She had been sick but a short time. The examination was made not over two hours after death. A little blood was oozing from the nostrils. The skin was not discolored. Upon section the flesh was normal in appearance. The liver was deeply reddened due to engorgement of the blood vessels. Blood flowed freely upon section. The spleen was slightly enlarged and dark colored. The kidneys were hyperaemic, especially the medullary portion. In the pelvis of the right kidney there was a large blood clot. The mucous membrane of the intestines was normal with the exception of several irregular areas of hyperaemia. In the fundus of the stomach was a large, dark blood-clot. No ulcers. The mesenteric glands were enlarged and darker than normal. In a few cases the cortex was hemorrhagic. The right lung was in a state of hyperaemia. The heart contained very little liquid blood.

Bacteriologic examination.—A few bacteria were found in stained cover-glass preparations from the spleen and liver. Two tubes of agar were inoculated with bits of the tissue from the hyperaemic lung, liver, spleen and kidneys. These tubes developed cultures of the hog-cholera bacillus. A few of them were pure cultures; the others contained, in addition to the hog-cholera organism, a quite large bacillus.

May 8th, rabbit No. 35, was inoculated subcutaneously with 0.5 c. c. of a dilute suspension of the growth from one of the spleen cultures.

May 15th, rabbit died this morning. The post-mortem examination showed the liver to be pale, the spleen very much enlarged, dark colored and friable. The kidneys were slightly hyperaemic. The intestinal tract normal. The heart sprinkled with ecchymoses. Cover-glass preparations from the various organs showed many small bacilli. Pure cultures of the hog-cholera bacillus were obtained from the heart blood and spleen. The bacillus obtained from this animal was carefully studied and cultivated on the various media. It was found to differ from the type of *B. cholerae suis* in producing indol. The nonpathogenic organism found to be associated with the hog-cholera bacillus in this animal has not been specifically determined but it is believed to be one of the normal intestinal forms.

Pig No. 2.—This hog died during the night and had just been buried. Male, weighing about 50 pounds. It had been sick for several days. The skin over the abdomen was deeply reddened. The liver was firm the interlobular connective tissue thickened, the centers of the acini were deeply reddened. Spleen slightly enlarged and dark colored. The kidneys were hyperaemic and the cortex of each thickly sprinkled with punctiform hemorrhages. The mesenteric glands were enlarged and pigmented. The intestines appeared to be normal. The stomach contained undigested food and earth. The mucous membrane over the fundus was hyperaemic and contained several hemorrhagic areas. The right lung was hyperaemic and contained several areas of hepatization. The pleura was covered with a grayish sand-paper-like exudate. In certain areas this was distinctly membraneous but for the greater part it was plastic. The parietal pleura was similarly affected. The left lung was partially collapsed and hyperaemic but no areas of consolidation. The pleura was covered with a very thin, pasty exudate.

Bacteriologic examination.—Several tubes of agar were inoculated at the post-mortem from the exudate over the lungs and from the liver, spleen and kidney. On the second day following, plate cultures were made from the exudate, liver and kidney, which were brought to the laboratory in sterilized jars.

The cultures made both at the post-mortem and in the laboratory contained two species of bacteria, namely, the swine-plague bacillus and the large bacillus found associated with the hog-cholera bacillus in pig No. 1. In the tube cultures this organism seemed, on account of its much more vigorous growth, to predominate. In the plate cultures from the exudate, however, only a few colonies appeared, while those of the swine-plague bacillus were very numerous. Plate cultures were made and rabbits were inoculated from the cultures obtained from the liver, spleen and kidneys. These failed to reveal the presence of any hog-cholera bacteria. The swine-plague bacillus appeared in each case. Rabbits were inoculated with the contaminating bacillus with negative results.

A rabbit, inoculated subcutaneously with an emulsion of the lung prepared by grinding it in a mortar with bouillon, died in 36 hours and its organs contained innumerable swine-plague bacteria. Pure cultures of this organism were obtained from the blood.

Pig No. 3.— This pig had died the day before and had been buried. It was dug up for examination. Black-and-white pig, weight about 60 pounds. There was no discoloration of the skin; the liver, spleen and kidneys resembled those in pig No. 2. The serous coat of the intestines was thickly sprinkled with punctiform hemorrhages. The mucosa was deeply reddened in certain areas. The lymphatic glands slightly swollen and oedematous. The cephalic lobes of both lungs were collapsed. Otherwise the thoracic organs were normal in appearance. Cultures were made from the spleen and liver. These contained hog-cholera bacteria in impure cultures. No swine-plague bacteria were found.

Pig No. 4.— This pig had been dead and buried for 24 hours. It was about the size of pig No. 2. The examination showed lesions resembling closely those of pig No. 2, but post-mortem changes had discolored parts to such an extent that details were precluded. There was no consolidation of the lungs or ulcers in the intestines. Cultures were not made.

Pig No. 5.—(Pigs Nos. 5 and 6 were received at the laboratory June 5th, they having been sent by express for the purpose of examination). This pig was found dead June 4th. White, male, weight about 12 pounds. It was considerably decomposed. There was no consolidation of the lung tissue. The liver, spleen and kidneys were not enlarged. In the cæcum, upper and transverse portion of the colon, the mucous membrane was thickened and necrotic. The mesenteric glands were enlarged. Cultures were made in agar and bouillon and a rabbit inoculated from the intestinal lesions. A portion of the intestine was thoroughly washed in boiled water, the superficial necrosis was scraped away. Bits of tissue from the base of the necrotic mass were obtained for making the inoculations. The cultures revealed the presence of *Bacillus coli communis*, and the bacillus of hog-cholera. The rabbit died on the eighth day with lesions characteristic of those produced by hog-cholera bacteria and from the blood, pure cultures of the hog-cholera bacillus were obtained.

Pig No. 6.—This pig was about the same size as pig No. 5. It was killed in what was thought the last stages of the disease on the morning of June fourth. It was slightly affected from decomposition. The liver was firm. The spleen slightly enlarged and the kidneys sprinkled with punctiform hemorrhages. In the cæcum and colon there were a few follicular ulcers. The lungs appeared to be normal. Agar and bouillon cultures were made from the liver, kidneys and follicles. The latter developed impure cultures of *Bacillus coli communis*, but the bacillus of hog-cholera was not isolated. Rabbits inoculated with large quantities of the cultures remained well.

At the time of my visit the disease had spread to several of the pens and consequently a large number of the animals had been exposed. Of these, 54 are reported by Dr. Allison to have died subsequently; but of the 54, 39 were small pigs. In nearly all the cases which developed after June sixth, the animals were sick from 5 to 15 days. The total loss up to June twentieth was 5 breeding sows, 31 shoats and 39 small pigs. The results of the examination of the six pigs show that the disease was a mixed infection of hog cholera and swine plague. Pig No. 1 furnishes a good illustration of the acute type of hog cholera and in pig No. 5 is an illustration of the chronic form. In pig No. 2 we had a case of apparently uncomplicated swine plague, in which the lesions were restricted to the pleural membranes. It is unfortunate that more of the animals could not have been examined but the facts elicited were sufficient to warrant the diagnosis. Such mixed outbreaks are not uncommon, as shown by the investigations of the Bureau of Animal Industry and those of Drs. Welch and Clements. It appears from their reports that the two diseases frequently coexist in the same animal. Although the loss was in itself heavy, it will be seen that a trifle less than 50 per cent. of the animals in the herd died. This is a low mortality for epizoötics of either of these diseases. The success attained in checking the disease is attributable to the great care exercised in isolation and disinfection. As already stated the disease had become quite well disseminated before its infectious nature was determined.

This outbreak is of much interest from the fact that the channel through which the hog cholera virus gained entrance to the herd has not been found. Sporadic cases of swine plague not infrequently occur from which the specific bacillus is obtained, but as yet we do not know of hog cholera appearing in such manner. The animals in this herd were kept under the most favorable conditions, respecting general care, ventilation, and cleanliness. The food was carefully prepared and wholesome. Hog cholera had not appeared in the vicinity and animals had not been purchased since the fall before, and the herds from which they came had not been affected. While the source is not known, the facts are suggestive in pointing out the necessity for further investigations into the normal habitat and distribution of hog-cholera bacteria.

Miscellaneous.—In addition to the above I have visited several localities where hog cholera or swine plague was reported to be raging. The places visited, at the request of the Commissioner of Agriculture, were at Schoharie, Albany, Batavia and Mansville.

At Schoharie the disease had disappeared, but the history and description of the lesions, as given by Dr. Marsh, who made a few post-mortems, indicate that it was swine plague. There was also some evidence that it had been contracted from animals at a county fair, where the animals in question had been taken. Later a few more pigs were attacked, but the disease was reported not to have spread beyond this farm. At Albany the disease had likewise disappeared. At Batavia a few hogs were found suffering from slight paralysis, but not sufficiently so to warrant their slaughter for examination. There had been considerable loss among the hogs on a few farms. The origin of the outbreak was traced to a boar, which had been bought by Mr. W., and which had been at the State Fair. The disease was said to have spread from this animal. Later, Mr. W. sent us the lungs, liver and spleen of two of the hogs which died. A careful bacteriologic examination was made, but the specific bacteria of hog cholera or swine plague could not be found.

At Mannsville, where I went in company with Inspector Quigley, was found a most deplorable condition. In the basement of a barn, filthy beyond description, were about 40 hogs, old and young, actually starving. Beside these there were about

15 cows, in a similar condition. The animals were emaciated, standing in filth, with no bedding and an exceedingly small allowance of food. Already several hogs had died and a few had been sold. The conditions found were reported to the local health officer, and to the Society for the Prevention of Cruelty to Animals. However, the owner of this herd had appealed to the Commissioner of Agriculture for assistance in eradicating the disease, with the hope that the Department would pay for and destroy the animals.

In July, Dr. J. A. McCrank, of Plattsburgh, sent to this laboratory two pigs from a herd of about 40, nearly all which had died of an epizoötic disease. These proved to be suffering from hog cholera, as demonstrated by post-mortem examination. It should be stated that in other herds Dr. McCrank found the cause of death to be the use of swill (dishwater) containing strong alkali from powdered soaps.

Dr. W. H. Kelly, of Albany, who has investigated a number of outbreaks of reported infectious swine disease, has sent us for diagnosis during the year material from no less than seven outbreaks in which he was unable to find characteristic lesions and in which a positive diagnosis could not be made without the aid of a bacteriologic examination. With two exceptions the cultures made and animals inoculated from this material failed to reveal the presence of any pathogenic bacteria. One or more specimens of a similar nature have been received from a number of veterinarians for examination and diagnosis. It is a significant fact, however, that very few of these appeared to have come from animals which died from a bacterial disease. The results of the examination of this material suggest the need of more thorough and more extended investigations into the nature of these epizoötics. In order that one may speak positively concerning the nature of these outbreaks, it is necessary to have a careful examination made of a considerable number of the animals which die in each epizoötic. The best interests of the livestock industry of the State require that these epizoötics and enzoötics should be accurately diagnosed and the methods best adapted for their eradication rigidly enforced.

IV.

A DESCRIPTION OF THE BACILLI OF HOG CHOLERA AND SWINE PLAGUE.

The specific organisms of these diseases have already been carefully and fully described. There are perhaps no other two species of pathogenic bacteria concerning which there has been more confusion than the bacilli of hog cholera and swine plague. While they are distinct species, widely separated by their morphologic characters and biochemic properties, they are frequently mistaken the one for the other. There is still some uncertainty manifested concerning the identity of the bacteria of these diseases with those of certain swine affections found in Europe. It has already been pointed out that the American hog cholera, the English swine fever and Danish swine pest are identical. The American swine plague and the German Schweineseuche are believed to be the same. This conclusion is based on the results of a number of special bacteriologic investigations which have been carried out in both this country and in Europe. As many requests are being received for descriptions of the hog-cholera and swine-plague bacteria, and also as there are some swine raisers in this State whose experience has caused them to feel that the diseases we call hog cholera and swine plague are different from those described in the reports of the Bureau of Animal Industry, it has seemed desirable to append a description of these bacteria, based on a careful study of the cultures obtained from swine in this State. It has been impossible, in the time at our disposal, to carry out extended investigations into the biochemic or pathogenic properties of these forms beyond the limits necessary for diagnosis. As was expected, the organisms studied have proved to be identical with those described from outbreaks in other parts of the country. It is important, however, for those who find slight discrepancies to remember that both the morbid anatomy and the bacteria of these diseases are subject to certain variations. These variations will be referred to in later paragraphs.

Bacillus choleræ suis (BACILLUS OF HOG CHOLERA).

Morphology.—A rod-shaped organism varying in size according to the medium in which it has developed. From agar cultures it is from 1.2 to 1.8 microns long and from .5 to .8 microns broad. The ends are rounded. Spores have not been observed. It is actively motile and a variable number, but usually from 3 to 5 flagella have been demonstrated.* The length of the flagella also varies. The average seems to be about 7 microns** although filaments 55 microns with an average length of 35 to 40 microns are reported.† It stains readily with the aniline dyes. Preparations made from cultures usually stain uniformly; while in the preparation made from the tissue of inoculated animals there is frequently exhibited a light center with a deeply stained periphery.

Cultural characters and biochemic properties.— This bacillus is grown readily on all of the ordinary media used in bacteriologic work at a temperature of 30 to 38° C.

Agar.— On the surface of inclined agar after 24 hours at a temperature of 37° C. a grayish, glistening nonviscid growth appears. When isolated the colonies are nearly round, convex .5 to 2.0 mm. in diameter. The edges are sharply defined, and even. In stab cultures a grayish growth develops along the needle track with a more vigorous growth on the surface about the needle puncture. The growth reaches its maximum in about 48 hours.

Gelatin.— In this medium the growth is moderately feeble, the colonies appearing as grayish dots. When magnified they are finely granular and of a yellowish tint. The quantity and form of growth depend considerably on the reaction of the gelatin. If decidedly alkaline there is often a tendency for the growth to spread. There is no softening or liquefaction of the medium.

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* Moore, Wilder Quarter-Century Book, 1893, p. 355.

**A micron is 1-1000 of a millimeter or 1-25000 of an inch. It is the unit for microscopic measurements.

†Ferrier, Archives de Med. Exper. et d'anat, Patholog. VIII, (1895), p. 58.

Potato.— The growth on potato takes the form of a very thin glistening layer. It is usually of a faintly yellowish color but this is subject to variation on different potatoes. If the reaction is strongly acid no growth appears.

Bouillon.— In alkaline bouillon it imparts in 24 hours a uniformly cloudy appearance to the liquid. Ordinarily there is no membrane on the surface. After some days' standing the growth begins to settle, forming a grayish, friable sediment. If the bouillon contains muscle sugar the reaction will be changed to acid, in from 24 to 48 hours, due to the fermentation of the sugar. Later, however, the liquid will become strongly alkaline, unless there was too much muscle sugar. In acid bouillon the growth is less vigorous. It grows better in a bouillon containing peptone than in a simple beef broth.

Milk.—When the milk is acid in the beginning it gradually becomes alkaline. There is no precipitation or coagulation of the casein. After standing for from two to three weeks in an incubator a gradually developing opalesence of the milk can be observed. Later it becomes clear, then light brownish in color. If allowed to stand longer in the incubator the volume of the culture shrinks by evaporation and the opalescent liquid becomes quite thick and dark-colored but not viscid. When the opalesence appears, the milk is strongly alkaline. The process seems to be a form of saponification of the fat globules due to the presence of the alkali produced by the bacteria.

Dunham's solution.— In this solution the growth is quite feeble. Ordinarily no indol reaction is obtained. (The writer has observed a marked indol reaction in two cultures of the hog cholera bacillus.)

Gas production.— In peptonized bouillon containing 1 per cent. dextrose, gas appears within 24 hours and continues to form for from three to five days. During the first day from one-fourth to one-half of the total quantity is produced. By the end of the second day the gas formation is nearly at an end. The total amount which collects in the closed branch of the fermentation tube is equivalent to about one-half of the capacity of this branch.

The gas set free is composed of CO^2 and an explosive gas which consists largely of H. The ratio of CO^2 to H in the fermentation tube is approximately as 1 to 2. The reaction of the liquid becomes strongly acid, which condition checks the multiplication of the bacteria.

Gas is not produced in bouillon containing lactose or saccharose. These sugars are not fermented. Alkaline cultures containing them become more strongly alkaline as the growth continues.

Thermal reactions.—This organism grows very feebly at a temperature of 20° C. It will not thrive at a temperature above 43° C. It is destroyed when exposed in moist heat at 58° C. for 10 minutes.

Disinfectants.—This organism is destroyed after an exposure for 10 minutes or less in the following solutions:

Carbolic acid, 1 per cent.
Hydrochloric acid, 1-5 of 1 per cent.
Sulphuric acid, 1-20 of 1 per cent.
Sulphate of copper, 1-4 of 1 per cent.
Formalin, 1 to 2,000.
Trikresol, 1-2 of 1 per cent.

Lime is also a good disinfectant when used in preparations containing about 1 per cent. CaO.

Drying.—This bacillus resists drying for a variable length of time, according to the protection it has. In a drop of a bouillon culture dried on a cover-glass and kept under bell jars, the vitality is retained for 5 to 8 days. In bits of animal tissue containing the bacilli, the vitality is retained for from 20 to 40 days, according to the quantity of tissue taken.

Pathogenesis.— Subcutaneous injections of from 1 to 3 c. c. rarely produce fatal results in swine. An intravenous inoculation of 5 c. c. usually produces a septicæmia. With smaller doses the "button ulcers," characteristic of hog cholera, have been produced (Welch). By feeding pigs with pure bouillon cultures the intestinal lesions, typical of hog cholera, have also been obtained (Smith).

Rabbits inoculated subcutaneously with 0.1 c. c. of a bouillon culture die in from 5 to 8 days. The essential lesions consist of necrotic foci in the liver and a very much enlarged and dark-colored spleen. Guinea-pigs are affected similarly to rabbits, but death does not usually occur until from 7 to 12 days. Pure cultures of the bacillus can be obtained from the blood, liver or spleen of the inoculated animals.

While the above description applies to the form most frequently encountered, the existence of varieties must be accepted. In 1894 Dr. Theobald Smith* called attention to several varieties of this species. On account of the significance of these forms, his tabulated description of them is inserted:

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* Bulletin No. 6, Bureau of Animal Industry, United States Department of Agriculture, 1897.

A TABLE ILLUSTRATING THE FORMATION OF GAS IN DEXTROSE BOUILLON (SMITH).

Bacilli belonging to the hog cholera group cultivated at 98 degrees F. in bouillon containing one-fourth per cent. peptone, two per cent. dextrose, and one-half per cent. sodium chloride.*

CULTURE.	QUANTITY OF GAS AT 98 DEG. F. SET FREE AFTER					Total 70–80 degs. F.	CO_2.	Explosive remainder (H).	Reaction.
	One day.	Two days.	Three days.	Four days.	Five days.				
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	
a									
Nebraska, 1889	17.4	41.7	54.8	60.0	57.4	54.8	38.0	62.0	Acid.
District of Columbia, 1889	24.0	48.0	54.4	56.0	54.4	50.4	30.0	70.0	do.
b									
Nebraska, 1886	32.5	35.8	37.5	40.0	37.5	36.6	34.0	66.0	do.
c									
New Jersey, 1890	33.3	48.3	51.6	56.6	55.0	50.8	37.7	62.3	do.
d									
New Jersey, 1890	40.8	50.0	53.6	56.0	53.6	50.4	38.0	62.0	do.
e									
Virginia, 1890	34.7	51.3	55.6	58.2	57.4	53.9	37.0	63.0	do.
f									
Maryland, 1889	43.4	48.6	50.4	52.1	50.4	46.9	37.0	63.0	do.
Virginia, 1889	45.0	58.2	58.2	58.2	55.8	52.4	36.0	64.0	do.
g									
Non-motile bacillus	....	....	....	33.0	37.5	36.6	26.0	74.0	do.
Abortion in mare	12.1	50.0	58.2	61.7	59.1	54.7	36.5	63.5	do.
Swine pest	32.8	43.4	45.0	45.0	45.0	41.8	33.3	66.6	do.
Mouse typhus	....	46.4	48.0	....	50.0	50.0	35.0	65.0	do.
B. enteritidis	....	48.8	52.0	....	48.8	48.8	29.5	70.5	do.

*There is no noticeable difference between 1 and 2 per cent. dextrose bouillon.

HOG CHOLERA GROUP OF BACTERIES (SMITH).

Variety or species.	Original source.	Morphology.	Motility.	Surface colonies on gelatine plates.	Bouillon cultures.	General character of growth.	PATHOGENIC POWER WITH REFERENCE TO RABBITS.	
							Degree as expressed in numbers.	Character.
*B. choleræ suis a**	Swine	Involution forms usually absent.	Active	Small, round, slightly convex.	Moderately clouded.	Only slightly vigorous.	1	Necrotic foci in liver.
B. choleræ suis b	Swine	Somewhat longer forms in bouillon membrane.	Active	Large; spreading like *b. coli.*	Surface membrane; growth turbid.	Vigorous; requires more alkali.	2	Necrotic foci in liver.
B. choleræ suis c	Swine	Involution forms common; slightly larger than *a.*	Active	Small, delicate colonies, resembling *b. typhi abdominalis.*	Turbid.	Vigorous	Very feeble.	Like *b. coli.*
B. choleræ suis d	Swine	A trifle plumper than *a.*	Active	Like *a*	Turbid; bacilli in clumps in early cultures.	Fairly vigorous.	4	Same as *a.*
B. choleræ suis e	Swine	Like *a*	Active	Like *c*	Like *a*	Fairly vigorous; agar growth viscid.	1	Same as *a.*
B. choleræ suis f	Swine	Slightly larger than *a*	Active	Like *a*, but larger	Turbid	Vigorous	3	No liver necrosis; suppurative changes in Peyer's patches, etc.
B. choleræ suis g	Swine	Like *a*	No motility	Same as *a*	Clouded	Like *a*	1	More speedily fatal than *a.*
Bacillus of abortion in mares	Vagina of mare.	Like *a*	Motile	Same as *a* or nearly so.	Clouded	Like *a*	4	Necrosis in liver and spleen.
Swine pest	(Denmark).	Like *a*	Motile	Same as *a* or nearly so.	Clouded	Like *a*		Same as *a.*
B. typhi murium Lœffler.	White mice (1890).	Plumper than *a*	Motile	Spreading like *b*	Turbid	Vigorous	4	No necrosis in liver.
B. enteritidis Gærtner.	Cow	Rather slender forms; variable.	Motile	Like *a*	Turbid	Vigorous	4	No necrosis in liver.

*In the text the corresponding letters in the Greek alphabet are used to designate the varieties.

On account of the wide differences which exist between forms recognized as varieties of the hog-cholera bacillus, it becomes difficult to fix the common characters which circumscribe the hog-cholera group of bacteria. A careful study of certain of these varieties will show that they possess properties not dissimilar from certain of those attributed to extreme varieties of *Bacillus coli communis*. The pathogenesis is usually considered of first importance, but here we find forms possessed of as little virulence as certain varieties of the colon group. The closer study of bacteria is directing attention not only to the significance of a fixed pathogenesis, but also to other characters, for it is believed by some writers that the disease-producing power of bacteria is the last character acquired and evidently it is the most variable and most readily lost. It is at the present time difficult, in fact impossible, to point out any limiting characters or properties for this group. Dr. Theobald Smith suggests "that all bacteria whose size approximates that of this group, which do not liquefy gelatin and whose fermentation properties are the same as those described for the group, should be ranged under it." The study of these bacteria has opened up important fields for investigation and thrown out many valuable suggestions for future inquiries concerning the important problems involved in the etiology of infectious diseases.

Baccillus Septicœmiœ Hemorrhagicœ. HÜPPE.

(BACILLUS OF SWINE PLAGUE.)

Morphology.—A non-motile, rod-shaped organism varying from 0.8 to 2.0 microns in length and from 0.1 to 1.2 microns in breadth. The ends are oval, and the shorter forms resemble micrococci. The size depends on the medium and the stage of development of the individual bacteria. A capsule has not been demonstrated, although often there appears to be one in preparations made directly from tissues. It is not observed in cultures. Spores have not been seen. Involution forms are not uncommon in old cultures. They are especially numerous in the organs of a rabbit when it is allowed to lie for some hours after death, before it is examined. It exhibits, when stained in cover-glass preparations made directly from animal tissues, a light center with deeply stained extremities (polar stain). In preparations made directly from cultures this character is much less marked. It stains readily with the basic aniline dyes. It does not retain the coloring matter when stained after Gram's method.

Cultural and biochemic properties.—This organism is less hardy than the bacillus of hog cholera, and on certain of the media used it grows very feebly or not at all. It requires a temperature of about 37° C. although it develops very slowly at the room temperature.

Agar.—The growth on this medium is not vigorous. It is of a neutral grayish color, with a glistening, moist appearing surface. It is slightly viscid and adheres to the agar surface. Isolated colonies vary from 1 to 2 mm. in diameter, nearly round, convex, with smooth and sharply-defined margins. The condensation water becomes faintly clouded with a grayish sediment which becomes viscid. Within the agar the colonies appear as minute grayish dots. In agar, especially in plates (Petri dishes), it emits a peculiar disagreeable pungent odor.

Gelatin.—Ordinarily it does not grow in gelatin. (Dr. Theobald Smith found that certain cultures grew in this medium.)

Potato.—It does not grow on potato.

Bouillon.—Alkaline peptonized bouillon becomes uniformly clouded in 24 hours when kept at a temperature of 36° C. Occasionally cultures are obtained in which the growth appears in the form of flocculent masses, but usually after a few generations these disappear and the liquid becomes uniformly cloudy. If the bouillon contains any dextrose or muscle sugar, its reaction becomes acid in 24 to 48 hours, owing to the fermentation of the carbohydrate. With the virulent cultures the liquid clears within a few days. The small amount of grayish sediment becomes viscid after some days, and on agitation it is forced up, appearing as a somewhat twisted tenacious cone, with its apex at or near the surface of the liquid. Frequently a thin, grayish, somewhat viscid band composed of bacteria is found on the sides of the tube at the surface of the liquid. It will not grow in acid bouillon. If the bouillon contains from 1 to 2 per cent. glucose, the growth is slightly more vigorous.

Effect on sugars.—In the fermentation tube, alkaline bouillon containing sugars become uniformly clouded in both branches. Gas is not produced. In bouillon containing dextrose and saccharose the reaction becomes strongly acid in 24 hours, but the reaction of alkaline bouillon containing lactose is not changed.

Milk.—Milk inoculated with this organism remains unchanged in appearance for several weeks. When boiled, after this period, the casein is not coagulated.

Indol.—This organism grows feebly in Dunham's solution; some cultures have given a decided indol reaction, but others have not. The production of indol is reported to be one of the properties of the German swine plague. Smith[*] obtained only a trace of indol in one out of four cultures of swine-plague bacteria.

Phenol.—This was found by Lewandowski's[†] method in all of the cultures tested by Smith (*l. c.*). I have failed to obtain the reaction in a few cultures, but usually it appears.

Thermal death point.— This organism is destroyed in bouillon at 58° C. in ten minutes. A temperature of 56° C. for this time did not destroy its vitality.

Effect of drying.— This bacillus can not stand drying. The bacilli in a drop of bouillon dried on a cover-glass and kept at the room temperature are destroyed in 24 to 36 hours. In similar preparations made from agar cultures they resist drying for from five to eight days. The difference in the time between the two cultures is probably due to the thicker layer in case of the agar preparations.

Persistence of vitality in water and soil.— Experiments to determine the length of time this organism will live in water and in the soil show that it is destroyed in water in test tubes in from nine to eleven days. In the soil it was not found after eight days. Dr. Smith states that it is destroyed in the soil after four days.

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[*] Special report on swine plague, 1891, p. 89.

[†] Deutche med. Wochenschrift, 1890, s. 1136.

Power to resist disinfectants.— The bacillus of swine plague is very sensitive to the action of disinfectants. A large number of these agents have been tested. The following are among the more important:

Commercial sulphuric acid, ⅛ per cent. kills in 30 minutes.
Commercial sulphuric acid, ¼ per cent. kills in 10 minutes.
Lime, lime water kills in 1 minute.
Lime, 0.015 per cent. kills in 30 minutes.
Carbolic acid, ½ per cent. kills in 60 minutes.
Carbolic acid, 1 per cent. kills in 5 minutes.
Carbolic acid, 2 per cent. kills in 1 minute.
Formalin, solution 1-2000 kills in 5 minutes.
Trikresole, ½ per cent. kills in 5 minutes.

Pathogenesis.—This organism is pathogenic for rabbits, guinea-pigs and mice, among the smaller experimental animals, and for swine. With the virulent form rabbits inoculated either subcutaneously or in the vein with very small, 0.001 c. c. doses, die of septicæmia in from 16 to 24 hours. Guinea-pigs are slightly less susceptible. When inoculated subcutaneously with 0.1 to 0.2 c. c. of a bouillon culture, they die in from 30 to 72 hours. Mice succumb in about 24 hours when inoculated with a drop of the culture. Pigs inoculated intravenously usually die from acute septicæmia in from 18 to 36 hours. If they live longer there may be decided lung lesions. (See report on swine plague, Smith.)

Distribution of swine plague bacteria in nature.— Dr. Smith discovered in the study of isolated or sporadic cases of pneumonia that the swine plague bacillus was present although the source of infection could not be found. Following out the method introduced by Sternberg in 1881, he inoculated rabbits with the secretions from the upper air passages of healthy swine and curiously enough found that over 40 per cent. of healthy swine harbor this organism. These observations were extended to other animals with the result that this species was found to be quite widely distributed in the upper air passages of the domesticated animals. Later the writer[*] made a careful study of this subject. From the results obtained it was shown that a bacillus not distinguishable from the swine plague bacillus is present in 48 per cent. of healthy pigs, 80 per cent. of cattle, 50 per cent. of sheep, 16 per cent. of horses, 30 per cent. of dogs and 90 per cent. of cats. These percentages are necessarily based on a comparatively small number of examinations. In the sheep the bacteria were possessed of a low degree of virulence, while those from the various cats possessed a very high degree of virulence, requiring but from 18 to 24 hours to kill rabbits.

It should be observed that so far as cultural characters and pathogenesis for rabbits are concerned the bacillus of swine plague is not distinguishable from the bacillus of rabbit septicæmia (Koch), of fowl cholera (Pasteur) and of the German *Wildseuche.* There is little definite knowledge concerning their distribution in nature outside of the living animal body. On this point there is special need of further investigation.

For convenience in comparing the properties of these two species of bacteria, and in order that they may be more easily contrasted, I have arranged them in like order in parallel columns.

THE DIFFERENTIATION OF HOG CHOLERA AND SWINE PLAGUE BACTERIA.

BACILLUS OF HOG CHOLERA.	BACILLUS OF SWINE PLAGUE.
1. Rod-shaped organism with ends rounded, 1.2 to 2.0 microns in length, 0.5 to 0.8 micron in width. The size varies according to the stage of growth and division, and the culture media.	1. Elongated oval organism 0.8 to 1.5 microns in length, 0.6 to 0.8 micron in thickness. The size varies according to the stage of growth and division, and the culture media.
2. From cultures it stains entirely. In tissues it usually stains around the periphery with darker extremities leaving a light centre.	2. From old cultures it usually stains entirely. When in process of division as found in the organs of freshly dead rabbits, the extremities stain leaving an unstained central band, "polar stain."
3. Actively motile in liquids.	3. Not motile in liquids.
4. From 3 to 9 flagella are demonstrable.	

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[*] Bulletin No. 3, Bureau of Animal Industry, United States Department of Agriculture, 1893, p. 28.

5. Vigorous growth in alkaline nutrient liquids. Less vigorous if liquids are acid in reaction.

6. Moderate growth on potato. (Varies according to reaction.)

7. Distinct growth on gelatin.

8. Saponifies milk in from 3 to 4 weeks.

9. Ferments dextrose with the formation of acids and gas.

10. Does not ferment lactose. Bouillon containing it becomes strongly alkaline. No gas.

11. Does not ferment saccharose. Bouillon containing it becomes strongly alkaline. No gas.

12. Destroyed by moist heat at 58 degrees C. in 15 minutes.

13. Dies in water in from 2 to 4 months.

14. It dies in the soil in from 2 to 3 months.

15. Rabbits injected subcutaneously with 0.1 c. c. of a bouillon culture of a virulent bacillus will die in from 5 to 7 days. Enlarged spleen, necrotic foci in liver.

16. Rabbits inoculated with culture of an attenuated variety live from 10 to 20 days or recover. The lesions are enlarged spleen, and infiltration of the follicles in Peyer's patches.

17. In guinea-pigs the lesions are practically the same as in rabbits. Death occurs in from 7 to 12 days.

18. Pigs are not usually affected by subcutaneous injection of small quantities of culture. If the pigs are killed within 1 to 3 weeks the bacilli are found in the local lesion and certain of the lymphatic glands. Fatal results are reported in a few cases by these injections.

19. Feeding cultures to pigs which have fasted for 24 hours pro-

4. No flagella have been found.

5. Growth moderate or feeble in alkaline nutrient liquids. No growth if liquids are acid.

6. No growth on potato.

7. Feeble or no growth on gelatin.

8. Produces no apparent change in milk.

9. Ferments dextrose with the formation of acids, but no gas.

10. Does not ferment lactose. No gas.

11. Ferments saccharose with the formation of acids. No gas.

12. Destroyed by moist heat at 58 degrees C. in 7 minutes.

13. Dies in water in from 10 to 15 days.

14. It dies in the soil in from 4 to 6 days.

15. Rabbits injected subcutaneously with 0.01 c. c. of a bouillon culture of a virulent bacillus will die in from 16 to 20 hours. Septicæmia.

16. Rabbits inoculated with a culture of an attenuated variety will live from 4 to 10 days. The lesions are local infiltration of pus cells with pleuritis, pericarditis or peritonitis.

17. Guinea-pigs are slightly less susceptible than rabbits. There is more local reaction. Death occurs in from 1 to 4 days.

18. Pigs are not usually affected by the subcutaneous injection of small quantities of culture. The bacilli are not found except in the local lesion. In a few cases fatal results are reported.

19. Feeding cultures to pigs usually produces no effect.

20. Intravenous inoculation into pigs usually produces a septic form

duces extensive intestinal lesions with fatal results.

20. Intravenous inoculation into pigs causes either an acute septicæmia or a chronic form of the disease in which are produced quite typical round, firm, elevated ulcers.

of the disease which kills in from 1 to 2 days. Inoculation into the lungs causes pleuritis, usually accompanied with pneumonia.

DESCRIPTION OF PLATES.

Plate 1. A portion of the cæcum of a pig affected with hog cholera. It shows the ulcers on the mucous membrane. The valve. (From the report on hog cholera, Bureau of Animal Industry, United States Department of Agriculture, 1889.)

Plate 2. Spleens from two pigs of the same age and weight. (a) Spleen of healthy pig. (b) Spleen from a pig dead from hog tied small intestine is shown at the right with the ileo-cæcal cholera. Drawings two-thirds natural size.

Plate 3. Right lung of pig. The stippled portion is usually involved in cases of infectious pneumonia or swine plague, c-cephalic lobe, b-ventral lobe, a-principal lobe. The ventral lobe is usually the seat of the more advanced disease and consequently the first to become hepatized. The cephalic portion of the principal lobe (X) is usually hepatized and the remaining portion deeply reddened.

Plate 4. Hog-cholera bacteria. (1) A drawing from a stained preparation from a bouillon culture four days old. It shows large involution forms. (2) A drawing of a part of the field from a stained cover-glass preparation from the spleen of a rabbit which died from the effects of hog-cholera bacteria. A few of the bacteria show a light center. (3) Hog-cholera bacteria showing flagella. Magnified about 1,000 diameters.

Plate 5. Swine-plague bacteria. (1) Drawing of a part of a cover-glass preparation of swine plague bacteria from a bouillon culture. (2) A drawing from a cover-glass preparation made from the spleen of a rabbit showing the polar stain. (3) A drawing from a similar preparation made from the lung of a pig which died of swine plague. It shows a large number of bacteria, very few of which exhibit the polar stains. The drawings show the bacteria magnified about 1,000 diameters in Figs. 2 and 3, and about 2,000 diameters in Fig. 1.

Contagious Abortion in Cows.

By **Professor James Law,**

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Forms of Abortion.—Cows are liable to abortion from a great variety of causes, some of which, like mechanical injuries, are purely individual to the animal and show little tendency to extend to other members of the herd. Other forms attack a considerable proportion of the herd at the same time, or in succession, and thus appear as if they partook of a contagious character. In many such cases, however, the implication of a number of pregnant cows in the same herd is only a common result of a special injurious condition, to which all are alike exposed, and the removal of this is the signal for the disappearance of the disease. Thus unwholesome food of all kinds which undergoes fermentation in the first stomach, causing the accumulation of gas (bloating) will at times cause a wide-spread abortion. The consumption of ice-cold water usually stimulates the womb to contraction and the unborn calf to active movements which can be easily observed in the right flank. This, frequently repeated or carried to excess in susceptible animals, will at times cause abortions. The consumption of irritant vegetables, which have a special tendency to act on the kidneys or womb, are causes of general abortions in herds. Ergoted grasses have long been known as causes of abortion, and the same remark applies to smut and several other fungi. It is true that these cryptogamic vegetable products vary much in their character and strength according to the variations of the season, and the local conditions under which they grow, as well as the time or stage at which they are harvested, so that the ergots and smuts of one year appear to be comparatively harmless, while those of another year, or season or locality are very injurious. The fact remains, however, that under given conditions of growth they are unquestionably causes of abortion, and in such cases the abortions are wide-spread in the herd or in different herds in the same district. Cases such as these are easily mistaken for contagious ones, though there is in the system of the aborting animal no self-propagating germ which would produce the disease if transferred to another animal. Still other conditions may produce wide-spread abortions in the absence of any specific contagious germ. On the magnesian limestones of New York, cows are very subject to small stones in the kidneys during the dry feeding of winter, and when this is added to other existing causes, like the riding of cows in heat, attacks made with the horns of their fellows, squeezing in half-closed gates, over driving, sloping stalls, or too laxative food, abortions are likely to be induced. In other susceptible animals the proximity to a slaughter-house, the sight and smell of dead carcases, or carrion, etc., will excite a pregnant cow to abortion.

The Contagious Form.—Any of the usual causes of sporadic or accidental abortion may co-exist with the true contagious element and give unusual energy to it, yet it is of the utmost importance to identify the contagion in all cases in which it is present as the essential cause. This can usually be done by a careful inquiry into the history of the outbreak.

When a herd has been continuously healthy up to the time of the introduction of a cow brought from a herd where abortion has been prevailing, and when, following her advent, one and another and another of the original numbers of the herd abort, without any apparent cause in the way of change of feed, water, barn, stalls or general management, the evidence of the introduction of the element of contagion by the cow in question is very circumstantial and forcible. If pregnant cows standing next to the new cow or near to her are among those that early abort, the argument for contagion is still further corroborated. If the trouble continues in the herd year after year, attacking fresh animals some months after their purchase, the case becomes still stronger.

Or take another case. A cow is sent from a herd to be served by a bull which has been allowed to serve an aborting cow, and her resulting pregnancy is terminated by abortion before the regular time, and this is followed by successive abortions by different animals in the previously healthy herd. On the face of it, an outbreak of this kind is manifestly contagious, and in the absence of any other appreciable cause for the trouble, it may be safely held to be so.

Or, a bull is brought from a herd where abortions have taken place, and after his arrival, the cows begin to abort, the first cases being in those which the new bull has served. The occurrence is manifestly due to contagion.

Or, a newly purchased cow aborts, and is disposed of in consequence, and another cow, placed in the same stall, in due time aborts also, and others follow in due time, especially those that stood next to or near to this stall. Everything points to an introduced contagion.

Such indications might be varied indefinitely, all variations, however, having the one thing in common, that the evidence of infection stands out prominently and unmistakably. The infection may have been evidently carried by the tail, tongue, soiled stall, litter, gutter, rubbing post, fence or other object, yet the fact of contagion can be demonstrated with reasonable certainty.

These conclusions have been repeatedly affirmed by actual experimental transmission. The Scottish abortion committee found that healthy pregnant cows often escape, though standing near or even next to an aborting cow, but that when a piece of cotton wool was inserted in the vagina of the aborting cow for twenty minutes, and then transferred to that of the healthy one, the latter invariably aborted. Galtier found that the infecting vaginal mucus of the aborting cow, when transferred to the same passage in other animals, caused abortion in the sow, ewe, goat, rabbit and guinea-pig; while if it was intensified by passing through the rodents, it would similarly affect the mare, bitch and cat.

Bang subjected two cows, which were three months pregnant and had come from healthy herds, to repeated vaginal injections, with the products of culture of the abortion bacillus in serum glycerine bouillon. Three injections were made on April 14th, May 23d and June 4th, and on June 24th one cow aborted. The other was ill, and when killed she was found to carry a dead fœtus. Pure cultures of the abortion bacillus were found in fœtal membranes and liquids of both animals.

Casual Infections.—In a case which came under the observation of the writer recently, a family cow, kept in a barn where no abortion had previously occurred, was taken for service to a bull in a herd where abortion was prevailing, and though she was only present at the latter place for a few minutes, she aborted in the sixth month.

Another cow, from the same aborting herd, was taken into another herd at a distance of about two miles, where abortion had been unknown up to that time, and some months later a cow standing in the next stall to her aborted. The remainder of this herd was sold soon after, so that the further progress of the disease could not be easily followed.

Jansen, as quoted by Sand, reports the case of a cow from an aborting herd having been taken into a herd that had been previously quite free from the disease. Soon after her arrival she aborted, and later cow after cow of the original herd aborted. The owner kept the matter secret, and sent his cows to a neighbor's bull for service, with the result that for two years abortion prevailed among the cows served by this bull.

Tobiassen quotes the case of a cow in an aborting herd, which calved a fortnight before the regular time. The calf was at once sent to another farm where no abortions had occurred, and placed in the same building with the pregnant cows, all which later aborted. The outbreak thus started lasted for several years.

J. R. Jansen reports that a cow brought from an infected farm, for fattening purposes, proved to be pregnant and finally aborted, and that twenty-four of the pregnant cows on the farm aborted in the same year.

Mörck reports that a cow which had aborted a fortnight previously was taken to a farm where abortions had never been known. She aborted during her next pregnancy, and so did all the herd, nine in number.

Christensen records the occurrence of a general abortion in a previously healthy herd, members of which had been sent for service to the bull of a neighboring aborting herd.

Uygaard reports that a bull from a healthy herd, but which had been allowed to serve some cows from a neighboring infected herd, was sold to go on a previously healthy farm, where he was put to fourteen cows only. Of these twelve aborted, while the other cows, served by another bull, remained well.

Cases like the above are not to be explained by some imaginary unwholesome conditions of the environments, since in every instance the surroundings of the animals and the conditions of life remained the same, and the only appreciable cause of the outbreak in every case was the contact with an animal from an aborting herd.

Experimental Infections.—Any possible doubt, however, may be removed by the cases of experimental transmission of the disease, by the transference of the mucus from the vagina of an aborting cow, to the vagina of a healthy pregnant one. The experiments of Bang have been already quoted.

The Scottish Commission (Woodhead, McFadyean and Atkin) took a pregnant cow from a healthy herd and placed her in a stable where a large number had aborted. They also inserted into the vagina of this cow a plug of cotton wool, which had been left for twenty minutes in the vagina of a recently aborted cow. This was repeated the next day, the plug being left in the vagina for several hours on each occasion. Within a month some indications of a threatened abortion showed themselves, and a seven-months' calf was dropped on the seventieth day after the inauguration of the experiment.

In a second experiment, a cow six months in calf and taken from a healthy herd, was placed in a stable with an aborting herd and a quantity of vaginal mucus from a cow which had recently aborted was injected under the skin of the vulva. She calved prematurely at the end of the eighth month.

Willamsen, when treating a herd for abortion took a piece of the afterbirth of an aborting cow and rubbed it on the vagina of a healthy cow of his own, which had a habit of carrying her calf fourteen days over time. Five days after she had premature parturition.

He took a fragment of the fœtal membrane from the cow just named and rubbed on the vagina of a pregnant cow, condemned to slaughter for tuberculosis. In seventeen days the cow aborted.

Abortion Germ.—A number of investigators have sought assiduously for the germ of abortion. More than twenty years ago Franck attributed the disease to *leptothrix vaginalis*, a spherical organism united in chain form.

The Scottish Abortion Commission isolated no less than five different bacteria from the abortion membranes and vaginal mucus, but failed to identify any one of these as the essential cause of the disease.

Nocard found in the fibrino-purulent matter between the chorion and womb, in aborting animals, two different organisms, a micrococus (globular microbe) isolated or united in chains of two or three or more, and a short thin bacillus (rod-shaped microbe) isolated or attached together in pairs. These he did not find in healthy pregnant cows. They seemed to have no evil influence on the animal in the intervals between pregnancies, so that he concluded that they caused disease of the fœtus and fœtal membrances alone and did not affect the womb or pregnant animal. He allows, however, that the germ can survive in the unimpregnated womb until the next pregnancy, and may thus be kept up for years in the same animal.

Galtier on the other hand has conveyed the disease by feeding and inoculation of the milk or abortion membranes, to sheep, goat, pig, rabbit and guinea-pig, and claims accordingly that the disease is one affecting the general system of the pregnant animal and that the germs can be conveyed through the blood to the womb. He claims that the germ is intensified in force by passing through the body of the rabbit, or guinea-pig and can then infect horses, dogs and cats.

Chester of the Delaware College Agricultural Experiment Station, found in the placentæ of aborting cows a bacillus, which in form and habit of growth closely resembled the common bacillus of the large intestine (*bacillus coli communis*). In the fermentation test however, it showed a marked difference from the colon bacillus, to which it seems to be so closely allied. Inoculated on rabbits it was not fatal. Injected into the vagina of a pregnant cow, it caused slight discharge four or five days, but the calf was carried to full time six and one-half months after the injection.

Bang found in aborting cows, between the womb and the fœtal membranes, a considerable odorless liquid exudate of a gelatinoid appearance, and some pus cells. There was active catarrh of the mucus membrane of the womb which continued after abortion and often maintained the disease into the next pregnancy. In the exudate was an abundance of very small bacilli which stained deeply with aniline colors, excepting in a vacuole or nucleus which was less highly colored. This bacillus grew well in serum—glycerine bouillon, and more sparingly in serum-gelatine agar. In the latter it showed a remarkable peculiarity in growing with special luxuriance in different zones at two separate depths, beneath the surface, while there was an intervening clear space in which little or no growth took place. This preference for two different grades of abundance of atmospheric air and rejection of the intervening grade serve to identify the bacillus in a very striking manner. Injected into the vagina in two pregnant cows from healthy herds it produced abortion in one on the 21st day, and death of the calf without prompt abortion in the second. It also induced uterine catarrh and abortion in ewes, rabbits, guinea-pigs and mares, when it was injected into the vagina. In several cases in which it was injected under the skin or into the veins, it was later found in abundance in the interior of the womb and the fœtal membranes and bowels of the fœtus. It can therefore live in the blood and pass from that into the womb to start its baneful work there.

Dr. V. A. Moore and the present writer have made a series of experiments at the New York State Veterinary College. We have found in the fœtal membranes and uterine mucus of a number of aborting cows, in different counties of the State, and situated widely apart from each other, a bacillus which in form and culture-experiments closely resembles *bacillus coli communis.* This was nearly always found in pure cultures, in a few cases only were other microbes found and these only such as are found in the healthy vagina. It was never found in the fœtal membranes nor in the mucus of the womb in cows which had come to the period of parturition in healthy herds. It agreed in most respects with the bacillus found by Chester, but differed somewhat in fermentation tests. It differed also in being fatal to rabbits when inoculated on these animals. Injected into the vagina in three pregnant cows, it continued to live on its lining membrane, producing more or less catarrh and mucopurulent discharge in the different cases, yet all three carried their calves to the full time as judged by the forward condition of the teeth, one having calved on the 123d day, the second on the 167th and the third on the 190th day after injection.

The investigations at the Delaware College Experiment Station and the New York State Veterinary College, indicate that the contagious abortion which was met with in the cows of these States is essentially different from the forms studied in Europe by Nocard and Bang respectively. The facts that the same germ was found alone or, exceptionally, along with the normal microbes of the healthy vagina in the womb of every aborting cow, and that it was not found in the healthy cow which had calved at full time, and that the generative passages were the seat of a catarrh, alike in the cows that aborted, and in those that were injected with cultures of the germ found in the womb of the aborting animal, are virtually all but conclusive, that this microbe is the essential cause of the abortion.

The fact that abortion has not so far occurred in the pregnant cows injected experimentally with the artificial cultures of this germ, only serves to show that under certain conditions the microbe operates slowly. In our cases the cows were dry during nearly the whole course of the experiment, and stood quietly in stalls, so that there was little accessory cause to assist in precipitating abortion. It is further worthy of note that in the form of abortion habitually prevalent in New York, it is the rule rather than the exception that the period of incubation often extends to the sixth month. In a recent case, which came under the observation of the present writer and in which the cow contracted the infection by the service of a bull in a neighboring aborting herd, the abortion took place at the sixth month of pregnancy. In our experimental cases, it was certain that the same bacillus, which was alone found in the aborting womb, and which was present there in great abundance remained present in the generative passages of the infected animals up to the time of parturition and thereafter.

It is worthy of notice that the recent bacteriological investigations of the disease in Europe show that the pathogenic germ is present in large numbers in the digestive organs of the calf, that the new-born calf can convey the disorder into a fresh herd (Sand) and that the viable calves of infected cows, are liable to die from intestinal disorders a few days after birth. Galtier, the Marquis de Poncius and Pry insist strongly on this. On a farm on the estate of the Marquis where abortion has prevailed for over twenty years, calves of infected cows show at birth or very shortly after symptoms of broncho-pneumonia and of a complication of nervous disorders. They are breathless, wheeze, discharge from the nose, cough, scour, have convulsions and other nervous troubles. A large proportion of such calves die; and their lungs are found in part red, consolidated and destitute of air, while the air tubes contain a mucu-purulent liquid. Lesions denoting inflammation of the pleural covering of the lungs of the liver and of the intestines are common.

This coincidence of a fatal disease in many of the surviving calves has not been specially noticed in the aborting herds in New York. Should it be found to be wanting or infrequent, it will establish still another distinction between the European abortions, as noticed by Nocard, Galtier, Sand, Bang and others, and the American type, as observed in Delaware and New York.

In investigating this subject it must be borne in mind that any catarrhal condition of the mucous membrane of the uterus hinders conception, and becomes a direct cause of abortion, and that the forms of invasion of the womb by pus-producing germs are as numerous as the number of different irritant germs that can live in the membrane. The question as to how many of these may induce contagious abortion is to be determined by the susceptibility of the membrane to the attack of each particular germ, and whether the latter can retain all its power of survival and virulence in passing from one animal to another. The presumption is, therefore, in favor of a variety of forms of contagious abortion, each due to its own specific microbe or microbes, rather than of a single unvarying type of the disease. It is the work of the future investigator to demonstrate the extent and nature of such variations, and to place the diagnosis and treatment of each on a substantial basis.

The indication that there are probably at least two forms of contagious abortion in cows raises the question whether both are to be found in our American herds, and, if not, whether there is not an urgent demand for such a rigid quarantine and inquiry into the condition of all imported cattle as will establish a reliable barrier against the more dangerous foreign disorder? No less important is it that we should recognize the presence of the more dangerous disease if it should already have a foothold in American herds, and trace its cause, nature and diagnostic symptoms, so that the treatment appropriate to each individual outbreak may be promptly and intelligently applied. The tens of thousands of dollars lost every year through the prevalence of contagious abortions in the dairy herds of New York would justify a liberal outlay to establish our knowledge and practice on a rational and scientific foundation. In Europe the loss on each aborting cow is set at from $12 to $25 per annum.

DO THE SAME ANIMALS ABORT SEVERAL YEARS IN SUCCESSION?

The question of persistent abortion, year after year, by the same cow, is one of far-reaching importance. If a first contagious abortion entails a second, a third, a fourth and a fifth in the same animal, in as many successive years, then manifestly her preservation is a mere squandering of money, apart from the danger of her transmitting the disease to other and healthy animals. If, however, on the other hand, she herself fails to abort the second or the third year, yet if she continues to carry in her generative passages the germs of the malady, as potent as ever for evil to other pregnant cows, her preservation in her present condition is a hidden source of the infection, that can still spread from her to all new and susceptible cows which may be added to the herd.

It was long supposed that repeated abortion for an indefinite number of successive years was inevitable in the animal which was once infected. There is no doubt that certain cases give color to this belief. In an organ so nervously susceptible as the womb, there is always a tendency to repeat the abortion under the stimulus of a new pregnancy and the gradual distension and development of the uterine walls. Yet statistics show that this only applies to a small proportion of cows, and these the most excitable and nervous. The tendency toward insusceptibility to the deleterious action of the germ, which still may be present, is in the cow greater as a rule than the disposition toward a nervous increase of the susceptibility. The difficulty in reaching a conclusion on this point depends on the fact that stock owners very commonly dispose of aborting cows, and as the freshly brought cows are sooner or later attacked, it is too confidently assumed that the old cows, too, would have aborted had they been retained. Many years ago observant New York dairymen had noticed that the same cow rarely aborted over three years in succession and the majority not over two. Quite recently the owner of a large herd, who had had much experience with the disease, assured me that the rule was that a cow did not abort a second time. The continuance of abortion in the herd was mainly among newly purchased cows, and others that had not been previously attacked. The same is measurably true of the European abortions. Nocard says that after three to five years there is an acquired immunity. Only heifers and the cows that have been recently brought in abort. Penberthy says that in case of repeated abortion in the same cow, the calf is carried longer each successive year until it comes to its full term. Sand, in his symposium of the experience of Danish veterinarians, says it is quite exceptional that a cow should continue to abort, but outbreaks of abortion disappear spontaneously if no new cows are brought in.

In the main this is endorsed by the experience of Bang. In a herd of 200 head, in the course of several years, 83 aborted in their first pregnancy, and of these only 20 aborted in the second, and 7 failed to breed. Counting these latter as having aborted, this amounted to less than one-third, while over two-thirds of the cows which aborted the previous year carried the calf to full time. In the herd only 30 aborted for two successive years and only 6 for three years running.

Paulsen quotes the case of a herd of 16, seven of which were sent for service to a bull in an aborting herd. All seven aborted; five at ten weeks, one at three months and one at four and one-half months before the normal period of parturition. One of the seven was sold, but the remaining six all went full time in the following year.

Mörck records the case of a herd of 16 cows, of which the majority aborted in the same year. The owner disposed of all the aborting animals and replaced them by others freshly purchased. Next year the new stock aborted, together with some of the cows that had been held over. He continued this course for eight years without any improvement, and then decided to keep the aborting cows, as well as the others. In two years the affection disappeared from the herd.

Such small herds, in which all become early infected, and in which there are not yearly additions of young animals in their first pregnancy, nor the opportunity for a continuous extension into new animals that have previously escaped infection, furnish a better opportunity than do the larger herds, to trace the acquirement of artificial immunity.

Prevention and Treatment.—Admitting the frequency of acquired insusceptibility, we have to guard more against the infection of new animals than against repetition of abortion in the same cows. To protect the new animals against infection, however, it becomes necessary to purge from the infection, all cows which still harbor the germ in their generative passages, though they do not themselves any longer abort. It becomes also necessary to guard against infection through stalls, bulls, etc., from such infected, but no longer aborting, cows.

Upon the following points there can be no dispute:

1st. The cow which shows symptoms of abortion should at once be removed from the others, and her stall, including the gutter and drain leading from it, thoroughly disinfected.

2d. Every cow which has aborted should be instantly removed from the stable into a separate building, and her stall, with its gutter and drains, thoroughly disinfected.

3d. The aborted fœtus, with its membranes, should be at once removed and burned or boiled, or deeply buried after it has been sprinkled with chloride of lime or other active disinfectant.

4th. The manure from the infected stable should be taken into an enclosure to which no cows have access, and freely watered with a solution of sulphate of copper. (One ounce in one quart of rain water.)

5th. The cow which has aborted, and those standing on each side of her, or the cow threatened with abortion, and those standing on each side of her, should have the external generative organs, the adjacent parts of the thigh and the whole length of the tail sponged every morning with the solution of one ounce of sulphate of copper in one quart of water.

6th. The cow that has aborted, or is suspected of abortion, and which has been isolated from the herd in a special stable, should have its stall carefully cleaned, scraped and watered daily with the sulphate of copper solution. Her manure and urine must be carefully disinfected, as provided for above.

7th. In case that more than one animal has aborted in a herd or stable, it is desirable to sponge the external generative organs, hips and tails of the whole herd daily with the sulphate of copper solution, and to disinfect the hind part of the stalls, the gutter and the drains every morning, as prescribed above.

8th. Further to prevent the introduction of the infection into a herd, all newly purchased cows should be put at first in a separate quarantine stable, and subjected to daily disinfection of the external parts, and the stalls. As each cow comes in at full time, and without any indication of disease, she may be transferred to the stable occupied by the general herd.

9th. In purchasing a bull the greatest care must be taken to see that he comes from an absolutely sound herd, and that he had not been allowed to serve cows from a herd where abortion exists. It is a safe precaution to wash his sheath with the disinfectant liquid and to inject it freely with the same before beginning to use him in the herd. He should be allowed to serve no cows from outside the herd, unless it can be shown that they are from herds that are absolutely free from abortion.

By a rigid application of the foregoing measures the extension of contagious abortion in a herd can be certainly prevented, and the rule being that the majority do not abort a second time the disease can in this way be got rid of.

It must be borne in mind, however, that in an infected herd there will always be a certain number of pregnant animals, in which the germ is already lodged deeply in the vagina and even in the womb, and these measures cannot prevent the occurrence of abortion in their cases. There is also the danger in a certain limited number of these, which have a tendency to abort a second time, that the germ will continue to live throughout the following year in the interior of the womb, and not only cause another abortion in the individual cow, but start the infection anew in other members of the herd.

There is some danger of such survival even in a cow which has become herself immune so that she will carry her calf to full time and yet infect other susceptible cows which may be exposed more or less directly to her discharges. It is for such cases that medication by the mouth and injections into the vagina or womb have been resorted to.

Among medicines used to check abortion by acting on the general system are viburnum prunifolium and potassium chlorate, which can hardly be upheld as disinfectants, but act only on the nervous system or on the general health. Carbolic acid one of the latest fads, is employed on the other hand with the intent of checking the propagation of the contagious element. Diluted in water so as to be non-irritating it has been injected daily under the skin, for a length of time and with alleged good results. It is noticeable however, that when the good effects have been apparently most constant the animals have at the same time been subjected to very careful and continuous external disinfection, which in itself is amply sufficient to account for the favorable outcome. When it has been employed apart from such external applications, the results have been much less favorable. Thirty-seven Danish veterinarians employed it in ninety-two separate herds, with results that were apparently good in forty-seven cases, doubtful in twenty, and negative in twenty-five. Thirteen other veterinarians who have employed it extensively report the results as doubtful or negative. It is not surprising that a majority of these practitioners abandoned a method which in theory must be looked on as unpromising and which proved so uncertain in actual practice.

10th. The other resort is a priori more promising consisting as it does in the application of a disinfectant, to the infected mucous membrane of the generative organs. The two agents most in use are carbolic acid and mercuric chloride.

Carbolic acid which is the less dangerous agent is prepared by adding one troy ounce and a half of the acid to a gallon of water, together with a troy ounce of carbonate of soda. This is injected daily for a week, through a large syringe, or an elastic rubber tube introduced into the passage and having a funnel inserted in its outer end, which is carried two feet higher than the root of the tail. A quart may be employed at each injection and it should be used milk warm.

The mercuric chloride, the more poisonous of the two agents, is used in a solution of one drachm to the gallon of water, to which is added a drachm of hydrochloric acid. This is used milk warm in the same way as the carbolic solution. This is very corrosive as well as poisonous and must be kept in a wooden vessel, safely locked up from man or animals.

The writer has used such injections in aborting animals and herds, and at the same time with the daily disinfection of the external parts of the generative organs, the stalls, gutters, drains and manure, and with perfect success where it could be thoroughly carried out.

It is subject to the serious objection that it causes active straining when the injection is administered, and if this becomes extreme, it may create apprehension, that it will precipitate an abortion rather than obviate it. This has led Nocard and others to abandon the injections and to rely altogether on external disinfectants. For pregnant animals this is to be commended as the disinfectant cannot penetrate and disinfect, an already infected womb, and is therefore not likely to prevent an abortion when the germ has already gained that cavity. In the cow that has just aborted on the other hand, the danger of injury from this cause is reduced to the minimum and the disinfectant injection thrown into the depth of the womb itself, offers the only hope of a speedy disinfection of that cavity. The external application merely prevents the access of new germs from without, while those that are within are left to be destroyed by the unaided action of the lining membrane of the womb. That this action is usually slow is illustrated by the fact that the abortion germs habitually live for a great length of time in the vagina and womb, before producing abortion, and that they often continue to live there much longer unless preventive measures are resorted to. In the animal which has aborted some time before and which is still unimpregnated, injections are equally commendable. It may not be admissible in this case to introduce the liquid into the womb, but even if limited to the vagina, the resulting disinfection is highly advantageous in cutting off this source of renewed infection for the uterus, and placing the organ in a much more favorable position for the destruction of the bacilli which it contains.

CONCLUSION.

In conclusion it may be stated that this subject still offers an extensive field for profitable investigation, and that we should not rest satisfied with the partial knowledge already attained, but push our inquiries in new directions, when there is a good prospect of securing the means of a fuller, more perfect and more easily available control of this great source of loss to our dairy interests. The form or forms of contagious abortion in our home herds should be fully investigated and the conditions of the life and propagation of the germs more definitely determined, and the same should be secured for other forms which may not as yet be indigenous to the United States, but which are likely to be introduced through the medium of importations. Our dairy industry is one of the most important of our sources of income, and a moderate outlay for an investigation which will render that safer and more remunerative, or which will protect it against threatened dangers from without, must prove an important measure of national economy.

FINANCIAL REPORTS

OF THE

State Agricultural Society, County, Town, and Other Agricultural Societies in the State of New York for the Year 1897.

NEW YORK STATE AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$1,027 56
From gate receipts	$2,061 25	
From rent of privileges	2,045 60	
From entries for premiums	4,216 95	
From annual members	608 00	
From life members	130 00	
From notes given	5,000 00	
From State	30,961 89	
From sundries	2,572 09	
Receipts for 1897		66,144 78
Total receipts		$67,172 34

DISBURSEMENTS.

For permanent improvements		$10,615 25
For interest		3,605 71
For labor		752 78
For salaries: Secretary, $1,500; treasurer, $1,500; office assistants, $745; police, $652.88; superintendents, $1,480; helpers, etc., $210; total		6,087 88
Sundries at fair, etc.		23,072 84
For premiums on horses	$7,779 00	
For premiums on cattle	4,250 00	
For premiums on sheep	1,770 00	
For premiums on swine	1,654 00	
For premiums on poultry	1,342 50	
For premiums on farm produce	667 00	
For premiums on dairy products	974 89	
For premiums on domestic	744 75	

For premiums on flowers	1,504 00		
For premiums on fruits	1,905 50		
Total premiums		$22,591 34	
Total disbursements			$66,725 80
Cash on hand			$446 54

B. F. Tracy .... President.
W. Judson Smith.. Treasurer.

HORNELLSVILLE FARMERS' CLUB.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$0 73
From gate receipts	$5,417 39	
From rent of privileges	746 50	
From entries for premiums	365 00	
From annual members	498 65	
From advertising in premium list	161 00	
From entries for races (horse)	1,300 00	
From notes given or any other obligation	2,179 49	
Receipts for 1897		10,668 03
Total receipts		$10,668 76

DISBURSEMENTS.

For labor	$582 73
For material	182 06
For salaries: Office assistants, $439.50; police and gatemen, $311.80; judges, $131.50; superintendents, $50.50; total	933 30
For attractions	533 00
For race purses (horses)	3,000 00
For incidentals	307 00
For race purses (bicycle or other), including cost of prizes	210 00

For racing expenses		$373 05	
Hay and straw, $67.72; office rent, $60; postage and stationery, $41.50; total		169 22	
Advertising, press notices and bill posting		1,249 75	
For premiums on horses	$325 40		
For premiums on cattle	940 10		
For premiums on sheep	593 80		
For premiums on swine	167 06		
For premiums on poultry	128 20		
For premiums on farm produce	207 00		
For premiums on dairy products	46 00		
For premiums on domestic	478 35		
For premiums on flowers	149 50		
For premiums on fruits	102 00		
Total premiums		3,137 41	
Total disbursements			$10,677 98
Balance (debit)			$9 22

L. A. Waldo .... President

Charles Adsit .... Treasurer

CAMBRIDGE VALLEY AGRICULTURAL SOCIETY AND STOCK BREEDERS' ASSOCIATION.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$159 23
From gate receipts	$6,658 85	
From rent of privileges	2,938 40	
From entries for premiums	1,283 96	
From entries for races (horse)	783 00	
From State	2,000 00	
From admission to grand stand	2,148 30	

Due from different persons for privileges.		$198 00	
From hay, grain, driving tickets, etc.		414 30	
Receipts for 1897			$16,424 81
Total receipts			$16,584 04

DISBURSEMENTS.

Balance due at close of fiscal year 1896		$245 75	
For payment of bonds, notes or other obligations		1,997 00	
For permanent improvements		706 76	
For labor		761 91	
For salaries: Secretary, $395; treasurer, $125; office assistants, $164; police, $121.50; judges, $221.83; superintendents, $71.24; helpers, etc., $37.25		1,135 82	
For printing and advertising hay and grain, attractions, band, etc.		3,804 45	
For race purses (horses)		1,646 25	
For race purses (bicycle or other), including cost of prizes		27 67	
For premiums on horses	$379 20		
For premiums on cattle	1,635 50		
For premiums on sheep	659 50		
For premiums on swine	439 00		
For premiums on poultry	1,198 50		
For premiums on farm products.	146 00		
For premiums on dairy products	10 00		
For premiums on domestic	533 49		
For premiums on flowers	49 70		
For premiums on fruits	60 50		
For premiums on miscellaneous.	361 75		
Total premiums		5,473 14	
Total disbursements			15,798 75
Balance (credit)			$785 25

Jerome B. Rice.................................. President.
Henry A. Qua.................................. Treasurer.

COUNTY.

ALBANY COUNTY AGRICULTURAL SOCIETY AND EXPOSITION.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$7 07
From gate receipts	$3,162 50	
From grand stand	338 25	
From rent of grounds	45 00	
From rent of privileges	826 00	
From entries for premiums	142 00	
From entries for races (horse)	620 00	
From bonds issued, notes given or any other obligation (note, National Exchange Bank)	900 00	
From State	1,535 89	
From capital stock sold, seven shares	70 00	
From National Trotting Association, penalties	137 50	
From forage sold	48 23	
Receipts for 1897		7,825 37
Total receipts		$7,832 44

DISBURSEMENTS.

For payment of notes	$1,800 00
For forage	146 29
For unpaid premiums, 1896	41 00
For stationery, postage, printing and advertising	421 91
For permanent improvements	497 83
For miscellaneous expenses	536 71

For salaries of 1895		$153 50	
For labor		391 55	
For interest, taxes, etc		243 59	
For refunding race entries		50 00	
For salaries: Secretary, $145; office assistants, $19.50; judges, $70.39; superintendents, $33.45; total		268 34	
For race purses (horses)		1,447 50	
For race purses (bicycle or other) including cost of prizes		30 00	
For premiums on horses	$181 00		
For premiums on cattle	446 75		
For premiums on sheep	263 50		
For premiums on swine	111 50		
For premiums on poultry	212 25		
For premiums on farm produce	108 00		
For premiums on domestic	264 25		
For premiums on flowers	57 75		
For premiums on miscellaneous	45 00		
Total premiums		1,690 00	
Total disbursements			$7,718 22
Balance (credit)			$114 22

James Keenholts .... President.
James O. Stitt .... Treasurer.

ALLEGANY.

RECEIPTS.

From gate receipts and grand stand	$729 32
From rent of grounds (pasture)	5 00
From rent of privileges	146 50
From entries for premiums in class 12	30 00
From annual members	70 00

From entries for races (horses)........	$201 50	
From overdraft	6 41	
From State..........................	946 23	
Receipts for 1897................................		$2,134 96
Total receipts		$2,134 96

DISBURSEMENTS.

Balance due at close of fiscal year 1896		$186 96
For payment of bonds, notes or other obligations		512 94
For water rate, $20; County Association Agricultural Societies, $10...........		30 00
For printing and advertising...........		115 88
For band, $45; balloon, $75; stabling, $4.		124 00
For labor on grounds and improvements		108 11
For material for repairs and permanent improvements		41 35
For salaries: Secretary, $50; treasurer, $25; office assistants, $18; police, $31.75; judges, $13; superintendents, $22; total		159 75
For race purses (horses)		485 00
For premiums on horses	$125 00	
For premiums on cattle	187 00	
For premiums on sheep......	61 00	
For premiums on swine......	38 00	
For premiums on poultry	33 25	
For premiums on farm products	35 75	
For premiums on dairy products	3 50	
For premiums on domestic....	53 80	
For premiums on implements and machines	3 00	
For premiums on flowers.....	11 65	

For premiums on fruits	$2 00		
For premiums on miscellaneous	2 25		
Total premiums		$556 20	
Total disbursements			$2,320 19
Balance (debit)			$185 23

E. S. Bartlett.. President.
F. H. Jackson.. Treasurer.

BROOME.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$22 00
From gate receipts	$2,165 55	
From rent of privileges	562 03	
From entries for races (horse)	335 00	
From State	1,363 71	
Receipts for 1897		4,426 29
Total receipts		$4,448 29

DISBURSEMENTS.

For payment of notes (old)		$622 14
For rent of grounds		250 00
For permanent improvements		223 75
For attractions		285 00
For labor and printing		407 05
For material, hay, straw, feed, lumber, etc.		236 89
For salaries: Secretary, $125; treasurer, $90; police, $89.50; judges, $67.50; superintendents, $90; helpers, etc., $22.50; total		484 50
For race purses (horses)		700 00
For premiums on horses	$188 00	

For premiums on cattle	$332 00		
For premiums on sheep	50 25		
For premiums on swine	26 75		
For premiums on poultry	166 75		
For premiums on farm produce.	34 25		
For premiums on dairy products.	6 25		
For premiums on domestic	119 75		
For premiums on implements and machines	10 00		
For premiums on flowers	15 25		
For premiums an fruits	61 25		
For premiums on miscellaneous.	136 50		
Total premiums		$1,147 00	
Total disbursements			$4,356 33
Balance (credit)			$91 96

Harry J. Wattles................................ President.
P. H. Landers................................ Treasurer.

CATTARAUGUS.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$271 84
From gate receipts	$1,661 20	
From rent of privileges	165 97	
From entries for premiums	506 00	
From entries for races (horse)	292 70	
From bonds issued, notes given or any other obligation	800 00	
From State	1,014 94	
From hay sold	13 00	
From interest	11 35	
From treasurer's balance, 1895	99 72	
Receipts for 1897		4,564 88
Total receipts		$4,836 72

DISBURSEMENTS.

Balance due at close of fiscal year......		$153 35	
For purchase of land		1,800 00	
For permanent improvements..........		126 81	
For material		431 22	
For salaries: Secretary, $50; treasurer, $36; office assistants, $50.50; police, $56.50; total		193 00	
For race purses (horses)...............		910 12	
For race purses (bicycle or other) including cost of prizes		125 00	
For premiums on horses	$100 00		
For premiums on cattle........	221 00		
For premiums on sheep	37 00		
For premiums on swine	29 00		
For premiums on poultry	28 75		
For premiums on farm products	38 35		
For premiums on dairy products	16 00		
For premiums on domestic......	41 40		
For premiums on implements and machines	4 00		
For premiums on flowers.......	2 50		
For premiums on fruits	8 75		
For premiums on miscellaneous	212 20		
Total premiums		738 95	
Total disbursements			$4,684 02
Balance (credit)			$152 70

C. R. Rhoades .... President.
E. L. Campbell .... Treasurer.

CHEMUNG.

RECEIPTS.

Balance on hand at close of fiscal year 1896			$51 53
From gate receipts		$1,882 82	
From rent of privileges		373 00	
From annual members		308 00	
From entries for races (horse)		90 00	
From bonds issued, notes given or any other obligation		1,200 00	
From State		1,405 22	
From grand stand		211 25	
From miscellaneous		49 56	
Receipts for 1897			5,519 85
Total receipts			$5,571 38

DISBURSEMENTS.

For payment of bonds, notes and other obligations		$1,103 65	
For expressage, cartage, postage, telegraph, etc.		105 18	
For attractions		385 00	
For printing and advertising		413 75	
For forage		79 44	
For labor		268 43	
For material		94 41	
For salaries: Secretary, $100; office assistants, $138.50; police, $169.38; judges, $22.75; superintendents, $31.25; helpers, etc., $18.75; total		480 63	
For race purses (horses)		879 00	
For race purses (miscellaneous)		357 80	
For premiums on horses	$275 00		
For premiums on cattle	120 00		
For premiums on sheep	93 00		
For premiums on swine	49 50		

For premiums on poultry	$209 25		
For premiums on farm produce.	85 25		
For premiums on dairy products.	17 00		
For premiums on domestic	263 25		
For premiums on flowers	183 00		
For premiums on fruits	31 50		
Total premiums		$1,326 75	
Total disbursements			$5,494 04
Balance (credit)			$77 34

Frank J. Cassada	President.
E. J. Young	Treasurer.

CHENANGO.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$153 29
From gate receipts	$2,159 15	
From rent of grounds	79 09	
From rent of privileges	449 12	
From grand stand	356 65	
From fair book, 1896	11 00	
From fair book, 1897	254 75	
From entries for races (horse)	300 00	
From entries for races (bicycle or other).	13 70	
From (donations) hay sold	36 56	
From bonds issued (second mortgage)	3,500 00	
From State	1,123 82	
From superintendent of grounds, 1896	16 54	
From use of track	88 84	
Receipts for 1897		8,389 22
Total receipts		$8,542 51

DISBURSEMENTS.

Floating debt		$3,500 00	
For payment of bonds, notes or other obligations		1,574 71	
For attractions		400 00	
For permanent improvements		14 51	
For printing and advertising		240 86	
For labor		87 82	
For material		160 51	
For salaries: Secretary, $50; office assistants, $75.26; police, $2; judges, $32; helpers, etc., $88.30; total		247 56	
For race purses (horses)		787 36	
For race purses (bicycle or other) including cost of prizes		84 05	
For all other expenses, including livery, feed, etc		203 57	
For premiums on horses	$123 60		
For premiums on cattle	427 26		
For premiums on sheep	69 69		
For premiums on swine	13 00		
For premiums on poultry	343 24		
For premiums on farm produce.	21 93		
For premiums on dairy products.	23 50		
For premiums on domestic	48 10		
For premiums on implements and machines	21 73		
For premiums on flowers	8 00		
For premiums on fruits	31 25		
For premiums on miscellaneous.	67 71		
Total premiums		1,199 01	
Total disbursements			$8,499 96
Balance (credit)			$42 55

C. W. Lanpher.................................... President.
Geo. A. Munson.................................. Treasurer.

CLINTON.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$1,982 12
From gate receipts	$5,851 53	
From rent of privileges	1,413 00	
From entries for premiums	284 15	
From annual members	99 00	
From entries for races (horse)	2,332 00	
From State	1,727 32	
From interest on deposits	23 15	
Receipts for 1897		11,730 15
Total receipts		$13,712 27

DISBURSEMENTS.

Balance due at close of fiscal year 1896		$78 94
For permanent improvements		445 87
For dividends		1,133 40
For labor		533 75
For material		189 39
For salaries: Secretary, $300; Treasurer, $150; general superintendent, $100; judges, $57; superintendents, $149; helpers, etc., $941.12; total		1,147 12
For race purses (horses)		3,658 00
For premiums on horses	$293 00	
For premiums on cattle	787 00	
For premiums on sheep	296 00	
For premiums on swine	262 00	
For premiums on poultry	218 50	
For premiums on farm produce	72 00	
For premiums on dairy products	24 00	
For premiums on domestic	284 25	
For premiums on implements and machines	60 00	
For premiums on flowers	76 50	

For premium on fruits	$30 00		
For premiums on miscellaneous	154 00		
Total premiums		$2,557 25	
Total disbursements			$10,293 72
Balance (credit)			3,418 55

D. F. Dobie.................................... President.
M. F. Parkhurst.................................... Treasurer.

CORTLAND.

RECEIPTS.

From gate receipts	$1,580 54	
From rent of grounds	203 75	
From rent of privileges	105 50	
From entries for premiums	35 45	
From entries for races (horse)	324 00	
From bonds issued, notes given or any other obligation (renewed note)	1,590 00	
From State	1,239 90	
Receipts for 1897		$5,079 14
Total receipts		$5,079 14

DISBURSEMENTS.

Balance due at close of fiscal year 1896	$1,347 56
For payment of bonds, notes or other obligations (interest)	90 00
For permanent improvements, dividends, labor and material	1,313 94
For salaries: Secretary, $50; office assistants, $54; police and gates, $170.98; judges, $25.20; helpers, etc., $283.59; total	583 77

For race purses (horses)................		$677 00	
For race purses (bicycles or other) including cost of prizes..............		254 68	
For premiums on horses	$78 00		
For premiums on cattle	389 50		
For premiums on sheep	23 00		
For premiums on swine	28 50		
For premiums on poultry	221 75		
For premiums on farm produce	26 75		
For premiums on dairy products	12 00		
For premiums on domestic......	144 50		
For premiums on implements and machines	46 50		
For premiums on flowers	38 50		
For premiums on fruits	16 50		
For premiums on miscellaneous.	63 68		
Total premiums		1,189 18	
Total disbursements			$5,456 13
Balance (debit)................................			$376 99

Geo. H. Hyde.................................. President.
Chas. F. Brown................................ Treasurer.

COLUMBIA.

RECEIPTS.

Balance on hand at close of fiscal year 1896.......		$20 30
From gate receipts..................	$4,699 60	
From rent of grounds...............	20 00	
From rent of privileges...............	1,261 98	
From annual members...............	272 00	
From entries for races (horse).........	1,092 29	
From donations	69 00	

From bonds issued, notes given or any other obligation	$1,524 30	
From State	1,618 32	
From discounts, etc	13 23	
Receipts for 1897		$10,570 72
Total receipts		$10,591 02

DISBURSEMENTS.

For payment of bonds, notes or other obligations (interest on mortgage)		$125 00
For purchase of land		636 78
For permanent improvements		2,434 43
For State and National Trotting Associations		45 00
For bands, $377; attractions, $454; advertising, $716.12; total		1,547 12
For material, $406.63; insurance, $31.50; total		438 13
For salaries: Secretary, $100; office assistants, $102; police, $108.50; judges, $139.54; superintendents, $62; helpers, etc., $239.27; total		751 31
For race purses (horses)		2,267 50
For race purses (bicycle or other) including cost of prizes		6 00
For total premiums		2,307 25
Paid on 1896 account		11 25
For premiums on horses	$277 00	
For premiums on cattle	318 00	
For premiums on sheep	243 00	
For premiums on swine	118 00	
For premiums on poultry	289 75	
For premiums on farm produce	75 50	
For premiums on dairy products	22 00	
For premiums on domestic	258 25	

For premiums on implements and machines	$20 00		
For premiums on flowers	101 50		
For premiums on fruits	65 25		
For premiums on miscellaneous.	528 50		
Total premiums		$2,307 25	
Total disbursements			$10,569 77
Balance (credit)			$21 25

John P. Mickle .... President.

Charles E. Halstead .... Treasurer.

DELAWARE.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$12 79
From gate receipts	$1,079 40	
From rent of grounds	50 00	
From rent of privileges	201 00	
From entries for premiums	171 75	
From annual members	75 00	
From entries for races (horse)	240 00	
From donations	35 00	
From bonds issued, notes given or any other obligation	600 00	
From State	1,276 79	
Receipts for 1897		3,728 94
Total receipts		$3,741 73

DISBURSEMENTS.

Balance due at close of fiscal year 1896	$124 25
For payment of bonds, notes or other obligations	367 72
For extra train, O. & W. R. R.	37 50

For permanent improvements..........		$84 50	
For attractions		283 00	
For labor		374 04	
For material		88 98	
For salaries: Secretary, $60; treasurer, $20; office assistants, $15; police, $49.25; judges, $75.99; superintendents, $62; helpers, etc., $24; total..........		306 24	
For race purses (horses)................		720 00	
For dues of and delegate's expenses to meeting County Agricultural Societies.		24 00	
For premiums on horses.......	$119 40		
For premiums on cattle........	314 95		
For premiums on sheep........	68 40		
For premiums on swine........	72 00		
For premiums on poultry......	99 68		
For premiums on farm produce.	39 41		
For premiums on dairy products.	14 00		
For premiums on domestic.....	93 89		
For premiums on implements and machines...............	17 50		
For premiums on flowers.......	8 75		
For premiums on fruits.......	48 00		
For premiums on miscellaneous..	342 68		
Total premiums		1,238 66	
Total disbursements			$3,648 89
Balance (credit)			$92 84

W. H. Fisher.................................. President.
W. D. Smith.................................. Treasurer.

DUTCHESS.

RECEIPTS.

Balance on hand at close of fiscal year, 1896........		$35 94
For gate receipts	$4,684 25	
From rent of privileges	1,055 94	
From entries for premiums, ...	1,334 10	
From feed (charge to exhibitors)........	56 23	
From entries for races (horse)	350 00	
From bonds issued, notes given or any other obligation	3,100 00	
From State	2,895 55	
From advertising, etc.	132 00	
Receipts for 1897		13,613 07
Total receipts		$13,649 01

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$1,563 91
For advertising and printing		1,993 41
For miscellaneous sundries		889 49
For attractions and amusements		728 00
For labor		367 13
For material		333 61
For salaries: Treasurer, $100; office assistants, $193.94; police, $129.25; judges, $201.31; superintendents, $131.75; helpers, etc., $262.25; total..		1,018 50
For race purses (horses)...............		1,015 00
For premiums on horses.......	$1,510 00	
For premiums on cattle........	1,764 00	
For premiums on sheep	205 00	
For premiums on swine	197 00	
For premiums on poultry	1,412 50	
For premiums on farm produce	134 00	
For premiums on dairy products	5 00	

For premiums on domestic	$273 15		
For premiums on flowers	27 00		
For premiums on fruits	96 00		
For premiums on miscellaneous.	10 50		
Total premiums		$5,634 15	
Total disbursements			$13,542 70
Balance (credit)			$106 31

Reginald W. Rives.................................. President.
Aug. B. Gray.................................... Treasurer.

ERIE.

RECEIPTS.

Balance on hand at close of fiscal year 1896.......		$298 50
From gate receipts	$4,241 00	
From rent of grounds.................	50 00	
From rent of privileges................	1,293 90	
From entries for premiums.............	142 70	
From annual members................	425 00	
From enties for races (horse)..........	883 75	
From fines	1 25	
From State	1,740 00	
Receipts for 1897..............................		8,777 60
Total receipts		$9,076 10

DISBURSEMENTS.

For payment of bonds, notes or other obligations (mortgage and interest).....	$2,098 00
For special attractions, $445; band, $135; feed, $162.45; total..................	742 45
For permanent improvements..........	503 07
For printing and advertising, $222.21; postage and express, $44.59; total....	266 80

For labor		$136 38	
For salaries: Secretary, $50; ladies' secretary, $47.28; treasurer, $50; office assistants, $71.56; police, $215; judges, $85.88; superintendents, $43.05; helpers, etc., $120.50; total		683 27	
For race purses (horses)		1,500 00	
For sundries		175 69	
For premiums on horses	$489 00		
For premiums on cattle	354 00		
For premiums on sheep	69 00		
For premiums on swine	118 00		
For premiums on poultry	324 00		
For premiums on farm produce.	126 75		
For premiums on dairy products	12 00		
For premiums on domestic	717 05		
For premiums on implements and machines	78 00		
For premiums on flowers	77 25		
For premiums on fruits	51 00		
For premiums on miscellaneous.	54 00		
Total premiums		2,470 05	
Total disbursements			$8,896 92
Balance (credit)			$179 18

J. W. Carter	President.
J. W. Salisbury	Treasurer.

ESSEX.

RECEIPTS.

From gate receipts	$2,086 00
From rent of grounds	441 75
From life members	10 00

From entries for races (horse)		$650 00	
From sale of score cards		11 60	
From State		1,015 45	
Receipts for 1897			$4,214 80
Total receipts			$4,214 80

DISBURSEMENTS.

Balance due at close of fiscal year 1896		$12 79	
For payment of bonds, notes and other obligations		618 57	
For printing and advertising		300 20	
For permanent improvements (including material)		384 50	
For band		90 00	
For labor		48 50	
For baseball games, balloon ascension, walking, etc		212 30	
For salaries: Secretary, $50; treasurer, $50; office assistants, $17; police, $47.25; judges, $46.50; helpers, etc., $26.25; total		237 00	
For race purses (horses)		1,383 00	
For race purses (bicycle or other) including cost of prizes		55 00	
For miscellaneous		185 62	
For premiums on horses	$103 70		
For premiums on cattle	142 20		
For premiums on sheep	90 00		
For premiums on swine	8 10		
For premiums on poultry	7 43		
For premiums on farm produce	21 80		
For premiums on dairy products	9 90		
For premiums on domestic	34 39		
For premiums on implements and machines	45 00		

For premiums on flowers	$2 31		
For premiums on fruits	10 46		
For premiums on miscellaneous	72 75		
Total premiums		$548 04	
Total disbursements			$4,075 52
Balance (credit)			$139 28

W. A. Tucker.................................... President.
A. J. Daniels.................................... Treasurer.

FRANKLIN.

RECEIPTS.

Balance on hand at close of fiscal year, 1896		$320 03
From gate receipts	$4,092 95	
From rent of grounds	1,146 00	
From rent of privileges	41 70	
From grand stand	1,160 88	
From annual members	1,600 00	
From entries for races (horse)	3,162 00	
From State	1,545 81	
Receipts for 1897		12,749 34
Total receipts		$13,069 37

DISBURSEMENTS.

For special attractions	$1,583 00
For advertising and printing	855 98
For permanent improvements	54 75
For miscellaneous	1,569 03
For labor	783 52
For material	86 80
For salaries: President, $50; secretary, $150; treasurer, $100; office assistants, $85; police, $154.40; superintendents, $88; helpers, etc., $36; total	663 40

For race purses (horses)		$5,491 00	
For premiums on horses	$285 00		
For premiums on cattle,	506 00		
For premiums on sheep	111 00		
For premiums on swine	152 00		
For premiums on poultry	54 00		
For premiums on farm produce.	74 00		
For premiums on dairy products	60 00		
For premiums on domestic	436 25		
For premiums on flowers	50 00		
For premiums on fruits	56 00		
For premiums on miscellaneous	154 00		
Total premiums		1,938 25	
Total disbursements			$13,025 73
Balance (credit)			$43 64

Edward W. Lawrence............................ President.
Tom Adams .... Treasurer.

FULTON.

RECEIPTS.

Balance on hand at close of fiscal year, 1896		$221 34
From Gate receipts	$3,146 15	
For rent of grounds	125 11	
From rent of privileges	812 00	
From entries for premiums	482 20	
From annual members	166 00	
From grand stand	768 25	
From entries for races (horse)	390 00	
From bonds issued, notes given or any other obligation	12,650 29	
From State	1,977 15	
Receipts for 1897		20,517 15
Total receipts		$20,738 49

DISBURSEMENTS.

For payment of bonds notes or other obligations		$12,577 36	
For music, $110; attractions, $265		375 00	
For permanent improvements		679 17	
For printing and advertising, $224.75; feed and hay, $66.34		291 09	
For labor		351 70	
For material		443 88	
For salaries: Secretary, $100; treasurer, $100; office assistants, $73.25; police, $68.50; judges, $136.25; superintendents, $100; helpers, etc., $100.25; total		678 25	
For race purses (horses)		2,080 00	
For miscellaneous and sundries		314 04	
For premiums on horses	$160 00		
For premiums on cattle	615 50		
For premiuns on sheep	120 00		
For premiums on swine	167 00		
For premiums on poultry	640 00		
For premiums on farm produce	353 75		
For premiums on dairy products	16 00		
For premiums on domestic	512 95		
For premiums on implements and machines	23 00		
For premiums on flowers	71 50		
For premiums on fruits	28 50		
For premiums on miscellaneous	64 00		
Total premiums		2,772 20	
Total disbursements			$20,672 69
Balance (credit)			65 80

Oliver Getman .... President.
Charles A. Miller .... Treasurer.

GENESEE.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$24 17
From gate receipts	$3,030 15	
From rent of grounds	7 00	
From rent of privileges	404 50	
From hay sold	20 00	
From annual members	426 00	
From life members	40 00	
From entries for races (horse)	546 00	
From advertising in catalogue	83 00	
From donations	55 50	
From State	1,417 06	
Receipts for 1897		6,021 21
Total receipts		$6,053 38

DISBURSEMENTS.

For payment of note, $250; interest on note and mortgage, $187.12; total	$437 12	
For insurance, $73.50; printing and advertising, $324.71; dues, $20; total	418 21	
For permanent improvements	95 72	
For miscellaneous and sundries	99 48	
For labor, $216.88; postage, $17; telephone and telegraph, $15.99; tracks, $17.25; total	267 12	
For material, $80; bands, $115; dinners at fair, $93.75; directors' meeting, $29; total	318 03	
For salaries: Secretary, $100; treasurer, $25; office assistants, $72; police, $103; judges, $53.50; superintendents, $40; helpers, etc., $40.50; total	434 00	
For race purses (horses)	1,126 00	

For race purses (bicycle or other) including cost of prizes and other attractions		$188 55	
For premiums on horses	$313 00		
For premiums on cattle	269 00		
For premiums on sheep	208 00		
For premiums on swine	91 00		
For premiums on poultry	124 00		
For premiums on farm produce.	56 50		
For premiums on dairy products	15 50		
For premiums on domestic	106 75		
For premiums on implements and machines	30 00		
For premiums on flowers	72 75		
For premiums on fruits	87 50		
For premiums on miscellaneous.	88 00		
Total premiums		1,462 00	
Total disbursements			$4,846 23
Balance (credit)			$1,207 15

Joseph N. Parker .... President.
C. D. Harris .... Treasurer.

GREENE.

RECEIPTS.

From gate receipts	$2,142 75
From rent of privileges	803 80
From entries for premiums	24 00
From annual members	67 00
From life members	50 00
From entries for races (horse)	273 75

From donations		$13 50	
From State		1,147 65	
Total receipts			$8,072 45

DISBURSEMENTS.

Balance due at close of fiscal year 1896 (due treasurer)		$41 92	
For payment of bonds, notes and other obligations		403 44	
For permanent improvements		3,000 00	
For labor, material and salaries		2,482 02	
For race purses (horses)		1,442 25	
For premiums on horses	$68 00		
For premiums on cattle	188 00		
For premiums on sheep	23 00		
For premiums on swine	32 00		
For premiums on poultry	38 50		
For premiums an farm produce.	39 25		
For premiums on dairy products.	15 00		
For premiums on domestic	157 25		
For premiums on implements and machines	13 00		
For premiums on flowers	24 75		
For premiums on fruits	18 00		
For premiums on miscellaneous.	56 50		
Total premiums		673 25	
Total disbursements			8,042 88
Balance (credit)			$29 57

F. G. Walters.................................... President.
Chester E. Whitcomb............................ Treasurer.

HERKIMER.

RECEIPTS.

Balance on hand at close of fiscal year, 1896........		$168 71
From gate receipts	$1,374.05	
From rent of grounds	115 00	
From rent of privileges	256 00	
From annual members	992 00	
From life members	150 00	
From entries for races (horse)	485 00	
From State	1,135 95	
Receipts for 1897		4,508 00
Total receipts		$4,676 71

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$1,414 36
For labor		283 57
For material		353 65
For salaries: Secretary, $45; treasurer, $45; office assistants, $100.50; police, $43.50; superintendent, $27; helpers, etc., $24; total		285 00
For race purses (horses)...............		989 99
For premiums on horses........	$143 00	
For premiums on cattle	189 50	
For premiums on sheep	42 00	
For premiums on swine........	50 00	
For premiums on poultry	14 25	
For premiums on farm produce.	58 25	
For premiums on dairy products	72 00	
For premiums on domestic	215 60	
For premiums on flowers	22 75	

For premiums on fruits	$22 00		
For premiums on miscellaneous	36 45		
Total premiums		$865 80	
Total disbursements			$4,192 37
Balance (credit)			$484 34

H. H. Green	President.
G. A. Rasbach	Treasurer.

JEFFERSON.

RECEIPTS.

From gate receipts	$3,361 13	
From rent of grounds	303 05	
From rent of privileges	852 38	
From annual members	1,060 00	
From entries for races (horse)	502 87	
From entries for races (bicycle or other)	19 50	
From sundry receipts	15 12	
From State	1,969 08	
From grand stand	972 37	
From rent of barns	138 85	
From fines collected	10 50	
Total receipts		$9,204 85

DISBURSEMENTS.

Balance due at close of fiscal year 1896	$1,705 77
For miscellaneous expenses	438 02
For permanent improvements (labor and material)	929 17
For rent of grounds	400 00
For interest	128 10
For printing	444 88
For labor	349 28

For attractions		$270 00	
For salaries: Secretary, $200; treasurer, $75; office assistants, $143; police, $119.50; judges, $68.50; directors, $160; superintendents, $174; helpers, etc., $124; total		1,064 00	
For race purses (horses)		1,587 50	
For race purses (bicycle or other) including cost of prizes		486 00	
For premiums on horses	$301 00		
For premiums on cattle	465 00		
For premiums on sheep	93 00		
For premiums on swine	203 00		
For premiums on poultry	138 50		
For premiums on farm produce	164 75		
For premiums on dairy products	47 00		
For premiums on domestic	255 65		
For premiums on flowers	175 50		
For premiums on fruits	100 00		
For premiums on miscellaneous	178 00		
Total premiums		2,117 40	
Total disbursements			$9,920 12
Balance (debit)			$715 27

Henry S. Barbour .... President.

F. M. Parker .... Treasurer.

LEWIS.

RECEIPTS.

Balance on hand at close of fiscal year, 1896		$421 08
From gate receipts	$2,796 75	
From rent of grounds	30 00	
For rent of privileges	413 50	

From annual members	$827 00	
From entries for races (horse)	30 00	
From bonds issued, notes given or any other obligation	1,700 00	
From State	1,290 85	
From ads in premium book	48 00	
From hay, apples, trees and manure sold	27 75	
Receipts for 1897		$7,163 85
Total receipts		$7,584 93

DISBURSEMENTS.

For payment of notes and interest		$3,404 34
For incidental expense		511 64
For permanent improvements		615 62
For special attractions		824 22
For labor		76 94
For material		50 43
For salaries: Secretary, $75; treasurer, $75; office assistants, $25; police, $103.25; judges, $15; superintendents, $110; helpers, etc., $99.06; total		502 31
For race purses (horses)		275 00
For race purses (bicycle or other) including cost of prizes		33 54
For premiums on horses	$192 00	
For premiums on cattle	380 00	
For premiums on sheep	9 50	
For premiums on swine	57 00	
For premiums on poultry	71 50	
For premiums on farm produce	50 75	
For premiums on dairy products	47 00	
For premiums on domestic	143 50	
For premiums on implements and machines	46 50	
For premiums on flowers	61 75	

For premiums on fruits	$34 00		
For premiums on miscellaneous	80 00		
Total premiums		$1,173 50	
Total disbursements			$7,467 54
Balance (credit)			$117 39

A. M. Seymour	President.
Ira Sharp	Treasurer.

LIVINGSTON.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$23 78
From annual members	1 00	
From State	1,135 05	
From percentage on racing purse (1896)	1 50	
Receipts for 1897		1,137 55
Total receipts		$1,161 33

DISBURSEMENTS.

For payment of notes	$1,014 38	
For labor	2 50	
For material	18 26	
For salaries: Secretary, $50; treasurer, $60; total	110 00	
For race purses (horses, for 1896)	10 00	
For premiums awarded in 1896	25 00	
Total disbursements		1,155 39
Balance (credit)		$5 94

W. A. Wadsworth	President.
Kidder M. Scott	Treasurer.

MADISON—BROOKFIELD AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$445 25	
From rent of grounds	4 00	
From rent of privileges	140 00	
From annual members	767 00	
From entries for races (horse)	68 20	
From entries for races (bicycle or other)	4 25	
From bonds issued, notes given or any other obligation (note)	500 00	
From State	1,186 66	
From grand stand	157 55	
From interest on Babcock mortgage of $940	56 40	
Receipts for 1897		$3,329 31
Total receipts		$3,329 31

DISBURSEMENTS.

Balance due at close of fiscal year 1896		$12 90
For payment of bonds, notes or other obligations		346 81
For purchase of land		266 67
For permanent improvements		504 73
For music and sports		178 00
For labor		167 45
For material		257 84
For salaries: Secretary, $30; treasurer, $30; office assistants, $9.50; police, $31.64; judges, $26.66; superintendents, $37; helpers, etc., $43.40; total		208 20
For race purses (horses)		237 00
For race purses (bicycle or other) including cost of prizes		45 75
For premiums on horses	$163 00	

For premiums on cattle	$275 00		
For premiums on sheep	68 00		
For premiums on swine	25 00		
For premiums on poultry	201 40		
For premiums on farm produce	38 05		
For premiums on dairy products	5 50		
For premiums on domestic	179 65		
For premiums on flowers	19 40		
For premiums on fruits	9 75		
For premiums on miscellaneous	4 75		
Total premiums		$989 50	
Total disbursements			$3,214 85
Balance (credit)			$114 46

H. L. Spooner	President.
B. G. Stillman, Jr	Treasurer.

MONROE—WESTERN NEW YORK AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$3,718 70	
From rent of grounds	20 00	
From rent of privileges	602 45	
From entries for premiums	308 95	
From entries for races (horses)	300 00	
From bonds issued, notes given or any other obligation	4,050 00	
From State	2,000 00	
From hay sold	187 24	
Receipts for 1897		$11,187 34
Total receipts		$11,187 34

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$4,903 13	
For advertising and printing		736 07	
For labor		207 27	
For material		661 47	
For salaries: Office assistants, $286.50; police, $178.50; judges, $33; superintendents. $135.35; helpers, etc., $140.50; total		773 85	
For race purses (horses)		1,025 00	
For premiums on horses	$296 00		
For premiums on cattle	554 00		
For premiums on sheep	296 00		
For premiums on swine	251 00		
For premiums on poultry	274 50		
For premiums on farm produce, dairy products	200 00		
For premiums on domestic	597 00		
For premiums on flowers	200 50		
For premiums on fruits	184 00		
For premiums on miscellaneous	20 00		
Total premiums		2,873 00	
Total disbursements			$11,179 79
Balance (credit)			$7 55

Joseph H. Sherman .... President.
C. G. Starkweather .... Treasurer.

MONTGOMERY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$739 48
From gate receipts	$1,936 60	
From rent of grounds	20 35	
From rent of privileges	356 00	

From entries for premiums		$157 02	
From annual members		109 00	
From life members		20 00	
From entries for races (horse)		691 15	
From State		1,264 91	
From sale of hay		58 75	
From grand stand receipts		295 20	
Receipts for 1897			$4,908 98
Total receipts			$5,648 46

DISBURSEMENTS.

For payment of bonds, notes or other obligations, (interest on note and mortgage)		$100 00	
For permanent improvements		358 66	
For printing, $189.29; music, $120		309 29	
For labor		375 08	
For material		187 10	
For salaries: Secretary, $100; treasurer, $40; office assistants, $23.50; police, $27; judges, $100.36; superintendents, $98.20; helpers, etc., $75; total		464 06	
For race purses (horses)		1,410 00	
For race purses (bicycle or other) including cost of prizes		62 00	
For premiums on horses	$246 00		
For premiums on cattle	200 00		
For premiums on sheep	121 00		
For premiums on swine	90 00		
For premiums on poultry	131 25		
For premiums on farm produce	90 25		
For premiums on domestic	189 95		
For premiums on implements and machines	6 50		

For premiums on fine arts	$90 70		
For premiums on miscellaneous	87 60		
Total premiums		$1,253 25	
Total disbursements			$4,519 44
Balance (credit)			$1,129 02

Jacob D. Snow	President.
William Wiles	Treasurer.

NEW YORK—AMERICAN INSTITUTE OF THE CITY OF NEW YORK.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$6,928 36
From gate receipts, fair of 1896 (1897 not reported by managers)	$11,067 05	
From rent of grounds, buildings, etc	7,852 73	
From rent of privileges, space, return loan to managers, rebate telephone 96	1,430 55	
From entries for premiums, from managers to pay premiums, 1897	2,575 00	
From annual members	400 00	
From life members	50 00	
From State	1,795 97	
From interest, bonds and balances, rebate, insurance	1,062 11	
From sales, chattels, duplicate medals and diplomas	1,218 12	
Recipts for 1897		27,451 53
Total receipts		$34,379 89

DISBURSEMENTS.

For permanent improvements (labor material)		$204 03	
For salaries: Office assistants, $2,590.50; superintendents, $383.33; helpers, etc., $1,412.67; total		4,386 50	
For general maintenance		3,461 07	
For payments accounts fair '96		8,903 02	
For premiums on poultry	$5 00		
For premiums on farm produce	518 00		
For premiums on flowers	1,844 00		
For premiums on fruits	546 00		
Total premiums		2,913 00	
Total disbursements			$19,867 62
Balance (credit)			$14,512 27

Charles F. Allen .... President.
W. H. Oakley .... Treasurer.

NIAGARA.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$32 51
From gate receipts	$1,922 64	
From rent of grounds	227 00	
From rent of privileges	157 75	
From life members	15 00	
From entries for races (horse)	162 50	
From entries for races (bicycle or other)	9 00	
From bonds issued, notes given or any other obligation (notes)	2,300 00	

From State	$1,187 93	
From interest accrued and paid on balances in bank	8 27	
Receipts for 1897		$5,990 09
Total receipts		$6,022 60

DISBURSEMENTS.

For payment of bonds, notes or other obligations, insurance and taxes, interest on mortgages and notes		$2,394 90
For plowing match		20 00
For State association and accompanying expenses		27 64
For permanent improvements		128 76
For printing and advertising		327 65
For entertainments (platform, music, etc.)		458 00
For labor		84 93
For material		114 28
For salaries: Treasurer, $100; office assistants, $93; police, $117; attendants, $88; directors, $118; helpers, etc., $27.50; total		543 50
For race purses (horses)		413 00
For race purses (bicycle or other) including cost of prizes		147 14
For premiums on horses	$153 00	
For premiums on cattle	181 00	
For premiums on sheep	77 00	
For premiums on swine	34 00	
For premiums on poultry	40 50	
For premiums on farm produce.	54 80	
For premiums on dairy products.	15 75	
For premiums on domestic	175 50	
For premiums on implements and machines	8 00	

For premiums on flowers	$78 50		
For premiums on fruits	51 50		
For premiums on miscellaneous	89 50		
Total premiums		$959 05	
Total disbursements			$5,618 85
Balance (credit)			$403 75

Geo. H. Bradley .... President.
B. F. Gaskill .... Treasurer.

ONEIDA.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$27 99
From gate receipts	$1,959 35	
From rent of grounds	500 00	
From rent of privileges	375 50	
From annual members	382 00	
From life members	30 00	
From entries for races (horse)	534 00	
From bonds issued, notes given or any other obligation	1,000 00	
From State	1,681 94	
Receipts for 1897		6,462 79
Total receipts		$6,490 78

DISBURSEMENTS.

For payment of bonds, notes or other obligations	$916 70
For association County Agricultural Societies	40 00
For permanent improvements	332 70
For membership, National Trotting Association	15 00

For labor		$627 05	
For material		497 60	
For salaries: Secretary, $50; treasurer; $50; office assistants, $103.50; police, $146.50; judges, $20; superintendents, $7; total		377 00	
For race purses (horses)		1,307 50	
For insurance		109 00	
For amusements		375 00	
For premiums on horses	$227 00		
For premiums on cattle	712 00		
For premiums on sheep	127 00		
For premiums on swine	98 00		
For premiums on poultry	258 00		
For premiums on farm produce	49 00		
For premiums on dairy products	27 00		
For premiums on domestic	327 25		
For premiums on implements and machines	40 25		
For premiums on flowers	93 50		
Total premiums		1,959 00	
Total disbursements			$6,556 55
Balance (debit)			$65 77

J. N. Jacobs .... President.
W. D. Reese .... Treasurer.

ONONDAGA—ONONDAGA COUNTY FAIR.

RECEIPTS.

Balance on hand October 26, 1896		$85 47
From gate receipts	$4,164 85	
From rent of grounds, $2,300; winter driving, $140	2,440 00	

From rent of privileges	$1,093 30	
From entries for premiums	401 28	
From season driving tickets sold of 1896	54 00	
From entries for races (horse)	1,095 00	
From notes given	5,200 00	
From State	1,718 34	
From stockholders for new grand stand and other improvements	3,205 50	
From sundry accounts collected	140 53	
Receipts for 1897: Cash, $18,452.80; credits, $1,060		$19,512 80
Total receipts		$19,598 27

DISBURSEMENTS.

Sundry accounts, 1896		$471 71
For payment of bonds, notes or other obligations		2,700 00
For permanent improvements		4,728 71
For advertising		857 35
obligations		2,700 00
Labor		561 74
General expenses		2,084 81
Rent		1,800 00
For salaries: Secretary, $400; treasurer, $200; office assistants, $297.80; police, $359.75; judges, $45; superintendents, $205; helpers, etc., $120.75; total		6,074 85
For race purses (horses)		2,007 50
For premiums on horses	$467 00	
For premiums on cattle	492 50	
For premiums on sheep	90 00	
For premiums on swine	236 00	
For premiums on poultry	317 37	
For premiums on farm produce	189 15	
For premiums on dairy products	12 00	
For premiums on domestic	188 62	

For premiums on flowers	$94 50		
For premiums on fruit	410 50		
For premiums on miscellaneous	238 81		
Total premiums		$2,736 45	
Total disbursements			$19,576 57
Balance (credit)			$21 70

H. N. Burhans	President.
Frank J. Webb	Treasurer.

ONTARIO.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$1 92
From gate receipts	$1,346 79	
From rent of grounds	126 00	
From rent of privileges	205 40	
From annual members	162 00	
From entries for races (horse)	220 00	
From bonds issued, notes given or any other obligation	195 00	
From State	1,164 22	
From hay and straw sold	8 00	
Receipts for 1897		3,427 41
Total receipts		$3,429 33

DISBURSEMENTS.

Balance due at close of fiscal year 1896	$16 48
For payment of notes and interest	586 94
Expenses of delegates at Albany, $26.46; annual dues State Association of County Agricultural Societies, $10	36 46
For permanent improvements	166 21

For insurance		$78 37	
For expenses of fall fair and winter meeting		390 03	
For labor, repairs to buildings and grounds		105 00	
For material		52 84	
For salaries: Secretary, $50; treasurer, $50; office assistants, $101; police, $72; judges, $42.42; superintendents, $40.50; helpers, etc., $20; total		375 92	
For race purses (horses)		550 00	
For race purses (bicycle, $20; foot races, $20)		40 00	
For premiums on horses	$199 00		
For premiums on cattle	76 00		
For premiums on sheep	163 00		
For premiums on swine	103 00		
For premiums on poultry	92 00		
For premiums on farm produce	92 52		
For premiums on dairy products	5 00		
For premiums on domestic	166 40		
For premiums on implements and machines	17 75		
For premiums on flowers	24 00		
For premiums on fruits	73 24		
For premiums on miscellaneous	6 00		
Total premiums		1,017 91	
Total disbursements			$3,416 16
Balance (credit)			$13 17

R. M. Lee .... President.
James S. Hickox .... Treasurer.

ORANGE.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$8 38
From gate receipts....................	$4,378 25	
From rent of privileges................	857 00	
From entries for premiums.............	454 20	
From annual members.................	514 00	
From entries for races (horse)...........	296 75	
From donations	1,247 00	
From bonds issued, notes given or any other obligation	9,600 00	
From State	2,000 00	
From sale of fence....................	513 50	
From score cards, $126.35; stable, $75.45.	201 80	
From interest	170 75	
Receipts for 1897................................		20,233 25
Total receipts		$20,241 63

DISBURSEMENTS.

Balance due at close of fiscal year 1896..	$42 07
For payment of notes or other obligations.	4,600 00
For purchase of land	3,000 00
For permanent improvements..........	5,293 42
For interest, insurance, freight and miscellaneous	741 46
For labor	282 87
For printing, $464.66; tuition, $236.50; music, $155; direction expenses, $188.21.	1,044 37
For salaries: Secretary, $50; treasurer, $50; office assistants, $75; police, $123.75; judges, $214.20; superintendents, $253.48; helpers, etc., $196.25; total	962 68
For race purses (horses)................	1,112 50
For race purses (bicycle or other) including cost of prizes...................	201 50

For premiums on horses	$346 00		
For premiums on cattle	601 00		
For premiums on sheep	42 00		
For premiums on swine	105 00		
For premiums on poultry	362 00		
For premiums on farm produce.	264 00		
For premiums on dairy products.	23 00		
For premiums on domestic	311 50		
For premiums on implements and machines	81 50		
For premiums on flowers	82 50		
For premiums on fruits	251 25		
For premiums on miscellaneous.	401 25		
Total premiums		$2,871 00	
Total disbursements			$20,151 87
Balance (credit)			$89 76

Augustus Denniston .... President.
H. M. Waring .... Treasurer.

ORLEANS.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$392 96
From gate receipts	$1,118 75	
From rent of grounds	35 50	
From rent of privileges	432 35	
From entries for premiums	144 00	
From interest	48 44	
From life members	20 00	
From refunded premium	3 00	
From annual members	1,341 00	
From State	1,567 11	

From grand stand		$177 46	
From grain sold (oats)		38 91	
From fodder sold		17 00	
Receipts for 1897			$4,943 52
Total receipts			$5,236 48

DISBURSEMENTS.

For unpaid premiums of 1896		$6 50	
For permanent improvements		43 59	
For insurance		91 88	
For labor		295 88	
For material		571 82	
For salaries: Secretary, $40; treasurer, $40; office assistants, $107; police, $147.43; judges, $30; superintendents, $97.25; helpers, etc, $210; total		671 68	
For race purses (horses)		310 00	
For race purses (bicycle or other) including cost of prizes		15 00	
For premiums on horses	$480 00		
For premiums on cattle	183 00		
For premiums on sheep	268 00		
For premiums on swine	150 00		
For premiums on poultry	169 00		
For premiums on farm produce	68 50		
For premiums on domestic	133 00		
For premiums on flowers	52 00		
For premiums on fruits	90 50		
For premiums on miscellaneous	60 50		
Total premiums		1,654 50	
Total disbursements			3,660 85
Balance (credit)			$1,675 63

E. A. Rowley	President.
A. W. Barnett	Treasurer.

OSWEGO.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$354 46
From gate receipts	$2,587 54	
From rent of grounds, rent of privileges	577 63	
From annual members	2,304 00	
From life members	20 00	
From entries for races (horse)	564 00	
From bonds issued, notes given or any other obligation	400 00	
From State	1,549 96	
Receipts for 1897		8,003 13
Total receipts		$8,357 59

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$2,286 97
For permanent improvements		383 02
For labor		515 95
For material		744 81
For salaries: Secretary, $65; treasurer, $25; office assistants, $22; police, $198.26; judges, $51.75; superintendents, $105; helpers, etc., $150; total		617 01
For race purses (horses)		1,170 00
For race purses (bicycle or other) including cost of prizes		315 00
For premiums on horses	$315 00	
For premiums on cattle	365 50	
For premiums on sheep	131 00	
For premiums on swine	138 50	
For premiums on poultry	363 55	
For premiums on farm produce	121 75	
For premiums on dairy products	23 00	
For premiums on domestic	83 75	

For premiums on implements and machines	$6 00		
For premiums on flowers	50 75		
For premiums on fruits	100 55		
For premiums on miscellaneous	346 05		
Total premiums		$2,045 40	
Total disbursements			$8,078 16
Balance (credit)			$279 43

H. H. Merriam	President.
Jay C. Harrington	Treasurer.

OTSEGO.

RECEIPTS.

From gate receipts	$1,742 25	
From rent of grounds	35 00	
From rent of privileges	490 50	
From entries for premiums and for annual members	338 00	
From life members	10 00	
From entries for races (horse)	173 75	
From donations	7 00	
From bonds issued, notes given or any other obligation	700 00	
From State	1,534 82	
From sale of oats	42 50	
From sale of hay	7 00	
From grand stand	135 85	
Receipts for 1897		$5,216 67
Total receipts		$5,216 67

DISBURSEMENTS.

Balance due at close of fiscal year 1896..		$378 03	
For payment of bonds, notes or other obligations		373 13	
For unpaid premiums of 1896		69 50	
For permanent improvements		427 00	
For labor		300 01	
For material		911 15	
For salaries: Secretary, $150; treasurer, $100; police, $39; judges, $23; superintendents, $62.50; helpers, etc., $101; total		475 50	
For race purses (horses)		500 00	
For premiums on horses	$122 00		
For premiums on cattle	642 00		
For premiums on sheep	209 00		
For premiums on swine	38 00		
For premiums on poultry	119 00		
For premiums on farm produce.	73 85		
For premiums on dairy products.	25 00		
For premiums on domestic	233 60		
For premiums on implements and machines	30 00		
For premiums on flowers	26 50		
For premiums on fruits	51 75		
For premiums on miscellaneous.	140 80		
Total premiums		1,711 50	
Total disbursements			$5,145 82
Balance (credit)			$70 85

Albert S. Potts .... **President.**
H. K. Murdock .... **Treasurer.**

PUTNAM.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$775 37
From gate receipts	$2,160 75	
For rent of privileges	368 25	
From entries for races (horse)	800 00	
From entries for races (bicycle or other)	41 50	
From State	989 01	
Receipts for 1897		4,359 51
Total receipts		$5,134 88

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$500 00
For band, $150; interest on note, $60; insurance, $40		250 00
For permanent improvements		465 72
For printing, $158.10; advertising, $100		258 10
For labor		310 00
For material		125 00
For salaries: Office assistants, $55; police, $100; judges, $25; superintendents, $60; total		240 00
For race purses (horses)		1,950 00
For race purses (bicycle or other) including cost of prizes		225 00
For premiums on horses	$160 25	
For premiums on cattle	79 00	
For premiums on farm produce	35 50	
For premiums on dairy products	30 00	
For premiums on domestic	164 25	
For premiums on flowers	20 75	

For premiums on fruits........	$44 25		
For premiums on miscellaneous..	1 50		
Total premiums		$535 50	
Total disbursements			$4,870 57
Balance (credit)			$264 31

Phillip Diehl .... President.
E. C. Weeks.. Treasurer.

QUEENS.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$1,562 68
From gate receipts....................	$11,268 25	
From rent of carriage sheds............	367 00	
From rent of privileges................	3,100 95	
From entries for premiums (poultry).....	99 25	
From annual members.................	2,102 00	
From life members....................	450 00	
From entries for races (horse)...........	4,248 75	
From entries for races (bicycle or other)..	81 00	
From notes given or any other obligation.	1,500 00	
From State	3,626 70	
From annual carriage tickets...........	489 00	
From sale of carriage sheds.............	436 00	
From miscellaneous receipts............	177 44	
Receipts for 1897.............................		27,946 34
Total receipts		$29,509 02

DISBURSEMENTS.

Debts of 1896		$420 00	
For payment of bonds, notes or other obligations, and interest		2,387 50	
For permanent improvements		1,017 75	
For incidental expenses		5,140 39	
For labor		669 25	
For salaries: Secretary, $600; treasurer, $750; police, $488; judges, $255; superintendents, $700.50; helpers, etc., $1,652; total		4,445 50	
For race purses (horses)		7,235 00	
For race purses (bicycle or other) including cost of prizes		250 00	
For premiums on horses	$210 00		
For premiums on cattle	643 00		
For premiums on sheep	117 00		
For premiums on swine	348 00		
For premiums on poultry	405 00		
For premiums on farm produce	565 00		
For premiums on domestic	517 25		
For premiums on implements and machines	195 00		
For premiums on flowers	850 00		
For premiums on fruits	539 50		
For premiums on miscellaneous	645 00		
Total premiums		5,034 75	
Total disbursements			$26,600 14
Balance (credit)			$2,908 88

J. W. Ahles	President.
Thos. H. Bacon	Treasurer.

RENSSELAER—AGRICULTURAL AND LIBERAL ARTS SOCIETY OF RENSSELAER.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$46 83
From gate receipts	$1,867 25	
From rent of privileges	527 59	
From entries from premiums	168 00	
From annual members	135 00	
From entries for races (horse)	487 50	
From donations by scrip	1,000 00	
From bonds issued, notes given or any other obligation	2,073 19	
From State	1,499 50	
From feed and stabling	59 05	
From National Trotting Association	79 50	
Receipts for 1897		7,896 58
Total receipts		$7,943 41

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$1,413 02
For printing and advertising		239 47
For permanent improvements		389 60
For rent of grounds		250 00
For labor		122 18
For material		228 19
For salaries: Police, $134.50; judges, $103.20; helpers, etc., $377.38; total		615 08
For race purses (horses)		1,320 00
For race purses, miscellaneous		1,089 27
For premiums on horses	$251 00	
For premiums on cattle	205 75	
For premiums on sheep	120 00	
For premiums on swine	158 00	
For premiums on poultry	387 50	

For premiums on farm produce.	$130 25		
For premiums on dairy products.	75		
For premiums on domestic	299 50		
For premiums on flowers	131 00		
For premiums on fruit	72 50		
For premiums on miscellaneous.	356 50		
Total premiums		$2,112 75	
Total disbursements			$7,779 56
Balance (credit)			$163 85

Gardner Morey .... President.
Chas. E. Heusted .... Treasurer.

ROCKLAND.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$521 75
From gate receipts	$1,140 75	
From rent of privileges	187 25	
From annual members	481 00	
From life members	20 00	
From entries for races (horse)	804 63	
From donations	8 50	
From bonds issued, notes given or any other obligation	500 00	
From State	981 67	
From grand stand	192 25	
From vitagraph amusement	63 56	
Receipts for 1897		4,379 61
Total receipts		$4,901 36

DISBURSEMENTS.

For discount on note		$7 50	
For amusement and band		285 45	
For printing and ground rent		662 21	
For society dues and expenses		195 36	
For labor		165 46	
For material		306 05	
For salaries: Secretary, $60; treasurer, $20; office assistants, $76.50; police, $181; judges, $142.40; superintendents, $90.40; helpers, etc., $19; total		589 30	
For race purses (horse)		1,535 00	
For race purses (bicycle or other) including cost of prizes		164 20	
For premiums on horses	$99 50		
For premiums on cattle	148 00		
For premiums on sheep	37 00		
For premiums on swine	19 50		
For premiums on poultry	99 25		
For premiums on farm produce	127 00		
For premiums on dairy products	75		
For premiums on domestic	19 30		
For premiums on flowers	51 75		
For premiums on fruit	88 25		
For premiums on miscellaneous	115 70		
Total premiums		806 00	
Total disbursements			$4,716 53
Balance on hand			$184 83

C. Irving Hopper.............................. President.
Daniel T. Inglis.............................. Treasurer.

ST. LAWRENCE.

RECEIPTS.

From gate receipts	$4,074 08	
From rent of grounds and privileges	842 25	
From annual members	25 00	
From entries for races (horse)	3,795 00	
From poultry exhibit	16 75	
From State	1,529 23	
From sundries	20 51	
Total receipts		$10,302 82

DISBURSEMENTS.

Balance due at clase of fiscal year 1896.		$1,629 14
For payment of bonds, notes or other obligations		251 00
For permanent improvements		408 16
For labor		767 32
For material		807 67
For salaries: Secretary, $100; treasurer, $60; office assistants, $75; police, $134.50; judges, $118.17; superintendents, $144; helpers, etc., $61; total		692 67
For race purses (horses)		5,300 00
For sundries		401 41
For premiums on horses	$221 00	
For premiums on cattle	621 00	
For premiums on sheep	82 00	
For premiums on swine	55 00	
For premiums on poultry	92 00	
For premiums on farm produce and garden	76 50	
For premiums on dairy products.	88 54	
For premiums on domestic	145 00	
For premiums on implements and machines	70 00	

For premiums on flowers	$28 50		
For premiums on fruits	19 00		
For premiums on miscellaneous	155 00		
Total premiums		$1,654 04	
Total disbursements			$11,911 41
Balance (debit)			$1,608 59

A. T. Martyn.. President.
C. J. Perkins.. Treasurer.

SARATOGA.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$106 55
From gate receipts	$2,600 95	
From rent of privileges	680 50	
From annual members	714 00	
From entries for races (horse)	342 50	
From entries for races (bicycle or other)	4 00	
From donations	465 00	
From State	1,556 76	
From miscellaneous	104 00	
From grand stand	562 35	
Receipts for 1897		7,030 06
Total receipts		$7,136 61

DISBURSEMENTS.

Unpaid premiums of 1896	$7 50
For miscellaneous	$197 82
For payment of bonds, notes or other obligations	1,130 91

For educational purposes		$106 00	
For permanent improvements		826 35	
For insurance, $93.18; printing and advertising, $250.33		343 51	
For labor		272 87	
For material and supplies		447 32	
For salaries: Secretary, $150; treasurer, $50; office assistants, $104; police, $78; judges, $67.58; superintendents, $85; helpers, etc., $115.79; total		650 37	
For race purses (horses)		1,030 00	
For race purses (bicycle or other) including cost of prizes		139 00	
For premiums on horses	$138 60		
For premiums on cattle	432 40		
For premiums on sheep	155 00		
For premiums on swine	125 00		
For premiums on poultry	197 00		
For premiums on farm produce	97 75		
For premiums on dairy products	10 75		
For premiums on domestic	161 65		
For premiums on implements and machines	62 50		
For premiums on flowers	89 25		
For premiums on fruits	64 25		
For premiums on miscellaneous	214 00		
Total premiums		1,748 15	
Total disbursements			$6,899 80
Balance (credit)			$236 81

Henry C. Dater .... President.

Walter I. Cavert .... Treasurer.

SCHOHARIE.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$20 34
From gate receipts....................	$2,269 70	
From rent of grounds..................	161 10	
From rent of privileges................	453 00	
From entries for premiums.............	215 00	
From entries for races (horse)..........	370 00	
From donations	60 00	
From State	1,438 54	
From advertisements	109 00	
From insurance of buildings, loss by fire.	100 01	
From National Trotting Association....	37 50	
Receipts for 1897............................		5,213 85
Total receipts		$5,234 19

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$963 96
For dues State Association County Societies		10 00
For improvements		185 84
For printing		266 65
For labor		381 00
For material		247 27
For salaries: Secretary, $50; office assistants, $40.50; judges, $45.70; total..		136 20
For race purses (horses)..............		1,000 00
For insurance		45 00
For special attraction..................		240 00
For premiums on horses.......	$260 00	
For premiums on cattle.......	354 00	
For premoums on sheep.......	175 00	
For premiums on swine.......	92 00	

For premiums on poultry	$126 50		
For premiums on farm produce	128 00		
For premiums on dairy products	11 00		
For premiums on domestic	284 00		
For premiums on implements and machines	18 00		
For premiums on flowers	13 00		
For premiums on fruits	56 00		
For premiums on miscellaneous	11 50		
Total premiums		$1,529 00	
Total disbursements			$5,004 92
Balance (credit)			$229 34

Daniel W. Jenkins	President.
L. G. Van Tuyl	Treasurer.

SCHUYLER.

RECEIPTS.

Balance on hand at close of fiscal year		$1,030 23
From gate receipts	$642 75	
From rent of grounds, part payment	47 50	
From rent of privileges	46 50	
From annual members	240 00	
From entries for races (horse)	403 75	
From State	1,061 52	
From grand stand	62 45	
From interest	30 00	
From advertisements, fair book	33 00	
Receipts for 1897		2,567 47
Total receipts		$3,597 70

DISBURSEMENTS.

For premiums 1896 paid after report...		$29 25	
For permanent improvements..........		109 37	
For back taxes paid..................		91 80	
For labor		120 65	
For material		40 25	
For miscellaneous expenses.............		646 15	
For salaries: Secretary, $25; treasurer, $25; office assistants, $18; police, $42; judges, $13.50; helpers, etc., $26.50; total		150 00	
For race purses (horses)...............		815 00	
For premiums on horses.......	$106 00		
For premiums on cattle.......	83 00		
For premiums on sheep.......	112 00		
For premiums on swine.......	36 00		
For premiums on poultry......	78 25		
For premiums on farm produce.	28 50		
For premiums on dairy products.	3 50		
For premiums on domestic....	98 35		
For premiums on flowers......	30 00		
For premiums on fruits.......	49 50		
Total premiums		625 10	
Total disbursements			$2,627 57
Balance (credit)			$970 13

A. L. Hunter.................................. President.
Geo. C. Wait.................................. Treasurer.

SENECA.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$313 96
From gate receipts and grand stand	$1,315 20	
From rent of grounds	36 18	
From rent of privileges	166 00	
From annual members	746 00	
From entries for races (horse)	185 00	
From State	1,251 90	
Receipts for 1897		3,700 28
Total receipts		$4,014 24

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$102 00
For permanent improvements		27 00
For labor and expenses		143 35
For material		197 99
For salaries: Office assistants, $72; judges, $74.51; superintendents, 67.60; police and helpers, etc., $142.89; total		357 00
For race purses (horses)		340 00
For race purses (bicycle or other) including cost of prizes		10 00
Dues to State Society		10 00
For premiums on horses	$249 00	
For premiums on cattle	320 00	
For premiums on sheep	116 00	
For premiums on swine	146 00	
For premiums on poultry	175 00	
For premiums on farm produce.	36 25	
For premiums on dairy products.	9 00	
For premiums on domestic	149 25	

For premiums on implements and machines	$8 25		
For premiums on flowers	33 50		
For premiums on fruits	25 00		
For premiums on miscellaneous	34 75		
Total premiums		$1,302 00	
Total disbursements			$2,489 34
Balance (credit)			$1,524 99

Isaac L. Huff	President.
Leonard Story	Treasurer.

STEUBEN.

RECEIPTS.

From gate receipts	$4,127 64	
From rent of grounds	12 50	
From rent of privileges	931 22	
From entries for premiums	370 00	
From entries for races (horse)	660 00	
From State	1,913 81	
Miscellaneous	248 20	
Total receipts		$8,263 37

DISBURSEMENTS.

For payments of bonds, notes or other obligations	$1,854 76
For labor	235 30
For material	207 26
For salaries: Secretary, $300; treasurer, $50; office assistants, $252.70; police, $101.13; judges, $20; superintendents, $136; helpers, etc., $177.35; total	1,037 18
For race purses (horses)	1,350 00
For miscellaneous expenses	1,308 54

For premiums on horses	$389 00		
For premiums on cattle	770 95		
For premiums on sheep	329 00		
For premiums on swine	391 00		
For premiums on poultry	177 86		
For premiums on farm produce	177 75		
For premiums on dairy products	34 00		
For premiums on domestic	69 75		
For premiums on flowers	46 75		
For premiums on fruits	265 50		
For premiums on miscellaneous	349 00		
Total premiums		$3,000 56	
Total disbursements			$8,993 60
Balance (credit)			$730 23

B. L. Retan .... President.
E. C. Bennett .... Treasurer.

SUFFOLK.

RECEIPTS.

From gate receipts	$3,701 50	
From rent of privileges	520 00	
From life members	25 00	
From entries for races (horse)	643 00	
From State	1,583 55	
Total receipts		$6,473 05

DISBURSEMENTS.

Balance due at close of fiscal year 1896	$762 58
For permanent improvements	423 79
For insurance, $70.25; printing, $435.80	506 05
For labor	666 17
For material	340 00

For salaries: Secretary, $200; judges, $75; helpers, etc., $25; total		$300 00	
For race purses (horses)		1,625 00	
For race purses (bicycle or other) including cost of prizes		75 00	
For premiums on horses	$281 00		
For premiums on cattle	288 00		
For premiums on sheep	79 00		
For premiums on swine	74 00		
For premiums on poultry	268 50		
For premiums on farm produce	222 75		
For premiums on domestic	330 25		
For premiums on implements and machines	12 50		
For premiums on flowers	93 00		
For premiums on fruits	97 25		
For premiums on miscellaneous	52 00		
Total premiums		1,798 25	
Total disbursements			$6,496 84
Balance (debit)			$23 79

John S. Havens .... President.
Geo. W. Cooper .... Treasurer.

SULLIVAN.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$869 66
From gate receipts	$1,419 05	
From rent of privileges	156 50	
From annual memebers	152 00	
From entries for races (horse)	148 75	
From State	1,328 96	
Receipts for 1897		3,205 26
Total receipts		$4,074 92

DISBURSEMENTS.

Balance due at close of fiscal year 1896..		$3 50	
For payment of other obligations.......		80 00	
For permanent improvements..........		100 00	
For labor		281 88	
For material		192 70	
For salaries: Secretary, $50; treasurer, $10; police, $42.45; judges, $60.60; superintendents, $10; helpers, etc., $25; total		198 05	
For race purses (horses)................		594 85	
For premiums on horses.......	$199 00		
For premiums on cattle	282 00		
For premiums on sheep	31 25		
For premiums on swine.......	40 00		
For premiums on poultry......	178 10		
For premiums on farm produce.	166 55		
For premiums on dairy products.	74 10		
For premiums on domestic.....	24 10		
For premiums on implements and machines	2 00		
For premiums on flowers......	18 70		
For premiums on fruits........	31 70		
For premiums on miscellaneous.	6 00		
Total premiums		1,153 50	
Total disbursements			$2,604 48
Balance (credit)			$1,470 44

P. R. Pelton................................	President.
S. L. Strong	Treasurer.

TIOGA.

RECEIPTS.

From gate receipts	$953 70	
From rent of privileges	147 70	
From annual members	423 00	
From entries for races (horse)	123 55	
From State	1,107 83	
Total receipts		$2,755 78

DISBURSEMENTS.

Balance due at close of fiscal year 1896		$118 84
For balance of rent for 1896		100 00
For special attractions, $142.50; advertising, $255.98		398 48
For permanent improvements		89 84
For rent, $200; State Association, $10; National Trotting Association, $10		220 00
For labor		22 70
For material		65 94
For salaries: Office assistants, $19; police, $13.75; judges, $28; superintendents, $33; helpers, etc., $49; total		142 75
For race purses (horses)		467 25
For race purses (bicycle or other), including cost of prizes		36 75
For premiums on horses	$111 00	
For premiums on cattle	183 50	
For premiums on sheep	72 50	
For premiums on swine	25 00	
For premiums on poultry	63 50	
For premiums on farm produce	15 25	
For premiums on dairy products	15 00	
For premiums on domestic	231 60	
For premiums on implements and machines	3 00	

For premiums on flowers	$14 80		
For premiums on fruits	7 25		
For premiums on miscellaneous	41 30		
Total premiums		$783 70	
Total disbursements			$2,446 25
Balance (credit)			$309 53

George A. Ingersoll........................Vice-President.
James M. Hastings........................Treasurer.

TOMPKINS.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$738 13
From gate receipts	$1,239 00	
From rent of grounds	20 00	
From rent of privileges	673 02	
From annual members	2,534 00	
From entries for races (horse)	830 00	
From entries for races (bicycle or other)	16 05	
From advertising in premium list and signs on fence	178 50	
From State	1,578 88	
From sale of hay grown on grounds	150 00	
Receipts for 1897		7,219 45
Total receipts		$7,957 58

DISBURSEMENTS.

Balance due at close of fiscal year 1896	$273 69
For payment of bonds, notes or other obligations	392 00
For printing and advertising	715 17
For permanent improvements	473 76

For tents, insurance, music and miscellaneous		$912 41	
For labor		369 64	
For material		126 71	
For salaries: Secretary, $50; treasurer, $50; office assistants, $77.63; police, $66.50; judges, $38.75; superintendents, $89.20; helpers, etc., $58; total		430 08	
For race purses (horses)		1,720 00	
For race purses (bicycle or other), including cost of prizes		120 04	
For premiums on horses	$303 50		
For premiums on cattle	377 00		
For premiums on sheep	201 00		
For premiums on swine	265 00		
For premiums on poultry	72 25		
For premiums on farm produce	50 75		
For premiums on dairy products	31 00		
For premiums on domestic	137 25		
For premiums on flowers	47 25		
For premiums on fruits	69 75		
For premiums on miscellaneous	207 50		
Total premiums		1,762 25	
Total disbursements			$7,295 75
Balance (credit)			$661 83

Clinton D. Bouton .... President.
Edwin D. Shurter .... Treasurer.

ULSTER.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$37 83
From gate receipts	984 25	
From rent of privileges	177 25	

From annual members	$168 00	
From entries for races (horse)	219 50	
From bonds issued, notes given or any other obligation	759 50	
From State	1,202 45	
From grand stand receipts	144 00	
Receipts for 1897		$3,654 95
Total receipts		$3,692 78

DISBURSEMENTS.

For payment of bonds, notes or other obligations, paid off		$825 33
For rent of ground		175 00
For permanent improvements		99 56
For insurance		26 25
For labor		166 06
For material		77 19
For salaries: Secretary, $100; treasurer, $50; superintendents, $25; total		175 00
For race purses (horses)		425 00
For advertising and printing		188 91
For miscellaneous		331 02
For premiums on horses	$143 00	
For premiums on cattle	257 00	
For premiums on sheep	12 00	
For premiums on swine	26 00	
For premiums on poultry	225 50	
For premiums on farm produce	124 55	
For premiums on dairy products	16 25	
For premiums on domestic	111 00	
For premiums on implements and machines	80 00	
For premiums on flowers	23 25	

For premiums on fruits	$110 50		
For premiums on miscellaneous	107 50		
Total premiums		$1,236 55	
Total disbursements			$3,725 87
Balance (debit)			$33 09

W. Kelly Shook .... Vice-President.
Arthur G. Smith .... Treasurer.

WASHINGTON.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$735 34
From gate receipts	$5,834 60	
From rent of privileges	1,808 45	
From annual members	298 00	
From life members	210 00	
From entries for races (horse)	800 00	
From fines	27 00	
From bonds issued, notes given or any other obligation	8,000 00	
From State	2,458 80	
From rent of stalls and barn, extra entrance fees and advertising	200 00	
Receipts for 1897		19,636 85
Total receipts		$20,372 19

DISBURSEMENTS.

For payment of bonds, notes or other obligations	$8,450 49
For printing and advertising	888 61
For attractions	410 00
For insurance and taxes	175 95
For labor	473 47

For material and supplies		$619 69	
For salaries: Secretary, $300; treasurer, $150; office assistants, $162.75; police, $225.05; judges, $92.08; superintendents, $180.56; helpers, etc., $82; total		1,192 44	
For race purses (horses)		2,125 00	
For race purses (bicycle or other) including cost of prizes		131 50	
For miscellaneous disbursements		479 00	
For premiums on horses	$465 50		
For premiums on cattle	1,122 75		
For premiums on sheep	261 00		
For premiums on swine	198 00		
For premiums on poultry	286 25		
For premiums on farm produce	218 50		
For premiums on dairy products	25 00		
For premiums on domestic	587 75		
For premiums on implements and machines	192 25		
For premiums on flowers	130 00		
For premiums on fruits	56 00		
For premiums on miscellaneous	46 75		
Total premiums		3,589 75	
Total disbursements			$18,535 90
Balance (credit)			$1,836 29

John R. Tanner.................................. President.
W. Irving Bristol................................ Treasurer.

WAYNE.

RECEIPTS.

From gate receipts	$440 30
From rent of grounds	145 00
From rent of privileges	153 00

From annual members	$162 00	
From entries for races (horse)	112 50	
From donations	21 80	
From State	853 24	
Receipts for 1897		$1,887 84
Total receipts		$1,887 84

DISBURSEMENTS.

For payment of bonds, notes or other other obligations		$523 07	
For labor		31 75	
For material		27 90	
For salaries: Office assistants, $21; judges, $49; total		70 00	
For race purses (horses)		490 00	
For premiums on horses	$108 00		
For premiums on cattle	41 00		
For premiums on sheep	75 00		
For premiums on swine	116 00		
For premiums on poultry	146 00		
For premiums on farm produce	44 75		
For premiums on dairy products	1 50		
For premiums on domestic	12 15		
For premiums on implements and machines	67 00		
For premiums on flowers	4 00		
For premiums on fruits	53 65		
For premiums on miscellaneous	41 95		
Total premiums		711 00	
Total disbursements			1,853 72
Balance (credit)			$34 12

W. A. Langdon.................................... President.

E. D. Leonard.................................... Treasurer.

WESTCHESTER.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$313 89
From gate receipts	$9,173 00	
From rent of grounds	400 00	
From rent of privileges	2,244 87	
From entries for races (horse)	1,075 00	
From donations	1,285 00	
From bonds issued, notes given or any other obligation	6,500 00	
From State	2,000 00	
From rent of stables, packing places, notes, etc	1,242 25	
Receipts for 1897		23,920 12
Total receipts		$24,234 01

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$7,076 92
For interest on bond and mortgage		750 00
For permanent improvements		535 25
For labor, printing, posting, advertising, etc		3,806 97
For material		500 00
For salaries: Secretary, $500; Treasurer, $100; office assistants, $190; police, $303; judges, $163; superintendents, $250; helpers, etc., $200		1,706 00
For race purses (horses)		2,000 00
For race purses (bicycle or other), including cost of prizes		200 00
Premiums on horses	$3,850 50	
Premiums on cattle	398 00	
Premiums on sheep	160 00	
Premiums on swine	234 00	

Premiums on poultry	$413 25		
Premiums on farm produce	660 16		
Premiums on dairy products	108 25		
Premiums on domestic	547 00		
Premiums on flowers	121 00		
Premiums on fruits	233 50		
Total premiums		$6,725 66	
Total disbursements			$23,300 80
Balance (credit)			$933 21

James Hopkins .... President.
Joseph B. See .... Treasurer.

WYOMING.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$51 40
From gate receipts	$952 80	
From rent of grounds	25 00	
From rent of privileges	95 24	
From annual members	206 00	
From entries for races (horse)	54 50	
From notes given	1,925 00	
From State	1,051 23	
Receipts for 1897		4,309 77
Total receipts		$4,361 17

DISBURSEMENTS.

For payment of notes and interest	$1,869 68
For bands	82 00
For dues and expenses State Association.	45 00
For interest on mortgage	60 00
For labor	236 09

For material and supplies		$375 94	
For salaries: Secretary, $75; judges, $73.14; total		148 14	
For race purses (horses)		461 75	
For athletics		105 43	
Printing, postage, telephone and telegraph		223 26	
For premiums on horses	$107 75		
For premiums on cattle	243 00		
For premiums on sheep	129 00		
For premiums on swine	29 00		
For premium on poultry	30 75		
For premiums on farm produce.	21 75		
For premiums on dairy products.	15 25		
For premiums on domestic	68 10		
For premiums on flowers	8 00		
For premiums on fruits	20 75		
For premiums on miscellaneous.	43 20		
Total premiums		$716 55	
Total disbursements			$4,323 84
Balance (credit)			$37 33

Asa A. Luther.. President.

John Underhill.. Treasurer.

YATES.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$27 41
From gate receipts	$549 45	
From rent of grounds	90 75	
From rent of privileges	92 85	
From donations	49 68	

From bonds issued, notes given or any other obligation		$50 00	
From State		1,088 24	
From dividend on Yates County National Bank deposit		1 58	
Receipts for 1897			$1,922 55
Total receipts			$1,949 96

DISBURSEMENTS.

For payment of bonds, notes or other obligations, $367.47, $76.14, $360		$803 61	
For labor		96 02	
For material, $38.70; printing, $92.45; insurance, $37.50; expenses, $108.03		276 68	
For salaries: Secretary, $50; judges, $15.15; total		65 15	
For race purses (horses)		160 98	
For premiums on horses	$75 00		
For premiums on cattle	94 00		
For premiums on sheep	85 00		
For premiums on swine	17 00		
For premiums on poultry	66 00		
For premiums on farm produce.	17 00		
For premiums on dairy products.	6 00		
For premiums on domestic	99 10		
For premiums on flowers	4 50		
For premiums on fruits	49 50		
For premiums on miscellaneous.	8 00		
Total premiums		$521 10	
Total disbursements			1,923 54
Balance (credit)			$26 42

Ira R. Brundage .... **President.**

Frank R. Cole .... **Treasurer.**

TOWN AND OTHER SOCIETIES.

CUBA FAIR AND RACING ASSOCIATION.

RECEIPTS.

From gate receipts	$680 50	
From rent of privileges	413 87	
From entries for premiums	728 00	
From entries for races (horse)	270 00	
From bonds issued, notes given or any other obligation	500 00	
From State	932 54	
Receipts for 1897		$3,524 91
Total receipts		$3,524 91

DISBURSEMENTS.

Balance due at close of fiscal year 1896		$67 92
For payment of bonds, notes or other obligations		262 40
For rent of land		250 00
For labor		155 47
For material and advertising		482 59
For salaries: Secretary, $50; police, $18.88; judges, $9.04; superintendents, $60; total		137 92
For attractions		466 50
For race purses (horses)		600 00
For premiums on horses	$175 00	
For premiums on cattle	282 00	
For premiums on sheep	69 00	
For premiums on swine	55 00	

For premiums on poultry......	$120 75		
For premiums on farm produce.	28 25		
For premiums on dairy products.	2 50		
For premiums on domestic....	233 60		
For premiums on implements and machines	8 00		
For premiums on flowers......	22 25		
For premiums on fruits........	18 00		
For premiums on miscellaneous.	19 50		
Total premiums		$1,033 85	
Total disbursements			$3,456 65
Balance (credit)			$68 26

Geo. Amsden .... President.
Henry C. Morgan .... Treasurer.

WELLSVILLE FAIR ASSOCIATION.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$78 06
From gate receipts....................	$4,899 27	
From rent of grounds, pasture.........	8 00	
From rent of privileges................	525 10	
From entries for premiums............	205 15	
From entries for races (horse), $1,025, less $517.50 deducted from purses........	507 50	
From entries for races (bicycle or other).	20 00	
From donations	737 85	
From State	1,068 11	
From assessments	358 98	
Railroad award on account of flood damages	100 00	
Receipts for 1897..............................		8,429 96
Total receipts		$8,508 02

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$1,354 17	
For unpaid premiums of 1896		88 30	
For sports, prizes		121 00	
For labor		346 56	
For material		247 53	
For salaries: Secretary, $100; office assistants, $68; police, $84.88; judges, $80; superintendents, $39; helpers, etc., $36.50; total		408 38	
For race purses (horses), $2,250, less $517.50 entrance fees deducted		1,732 50	
For race purses (bicycle or other) including cost of prizes		110 00	
Miscellaneous fair expenses, $1,932.60; returned donations, $600; returned entrance, $20; insurance, $18.75		2,571 35	
For premiums on horses	$310 50		
For premiums on cattle	166 00		
For premiums on sheep	148 00		
For premiums on swine	63 00		
For premiums on poultry	80 50		
For premiums on farm produce	58 25		
For premiums on dairy products	21 00		
For premiums on domestic	104 50		
For premiums on flowers	14 50		
For premiums on fruits	15 25		
Total premiums		981 50	
Total disbursements			$7,961 29
Balance (credit)			$546 73

D. C. Ackerman .... President.
John McEwan .... Treasurer.

BINGHAMTON INDUSTRIAL EXPOSITION.

RECEIPTS.

From gate receipts and grand stand	$2,908 36	
From railroad ticket coupons	228 00	
From rent of privileges	477 00	
From entries for premiums	293 75	
From directors, cash advanced	950 00	
From entries for races (horse)	300 00	
From entries for races (bicycle or other)	3 50	
From State	1,769 55	
From hay, straw and feed	77 48	
From advertising	92 50	
Receipts for 1897		$7,100 14
Total receipts		$7,100 14

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$842 28
For advertising, printing, insurance and sundries		1,162 66
For amusements and band		610 00
For rent of grounds		400 00
For labor		244 74
For material, hay, straw and feed		185 22
For salaries: Secretary, $600; office assistants, $39.60; police, $124.25; judges, $87.15; superintendents, $78; helpers, etc., $100.75; total		1,029 75
For race purses (horses)		630 00
For race purses (bicycle, $56) including cost of prizes and hose, $250		306 00
For premiums on horses	$113 00	
For premiums on cattle	562 00	
For premiums on sheep	303 00	

For premiums on swine	$179 50		
For premiums on poultry	395 50		
For premiums on farm produce.	23 50		
For premiums on dairy products.	10 00		
For premiums on domestic	263 75		
For premiums on flowers	32 00		
For premiums on fruits	92 65		
For premiums on miscellaneous.	64 60		
Total premiums		$2,039 50	
Total disbursements			$7,450 15
Balance (debit)			$350 01

Julius E. Rogers	President.
U. S. Stevens	Treasurer.

FRANKLINVILLE DRIVING PARK AND AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$853 55	
From rent of grounds	40 00	
From rent of privileges	271 00	
From entries for premiums	673 00	
From entries for races (horse)	209 46	
From bonds issued, notes given or any other obligation	525 00	
From State	780 09	
Total receipts		$3,352 10

DISBURSEMENTS.

For payment of bonds, notes or other obligations and interest on mortgage	$702 00
For permanent improvements	75 00
For labor, including police, superintendents, helpers, etc	342 51

For salaries: Secretary, $100; treasurer, $25; office assistants, $67.15; judges, $49; superintendent, licenses expenses, $20; helpers, special attractions, etc., $205; total		$466 15	
For race purses (horses)		759 05	
For advertising and printing, telephone, postage, telegraph		429 30	
For premiums on horses	$93 00		
For premiums on cattle	151 00		
For premiums on sheep	60 00		
For premiums on swine	12 00		
For premiums on poultry	50 25		
For premiums on farm produce	28 25		
For premiums on dairy products	8 00		
For premiums on domestic	129 00		
For premiums on flowers	10 75		
For premiums on fruits	19 50		
For premiums on miscellaneous	43 25		
Total premiums		$605 00	
Total disbursements			$3,379 01
Balance (debit)			$26 91

Wm. A. Day.................................... President.
J. H. Smith.................................... Treasurer.

AFTON DRIVING PARK AND AGRICULTURAL ASSOCIATION.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$67 39
From gate receipts	$1,744 61	
From rent of grounds	125 00	
From rent of privileges and grand stand	499 72	

From entries for premiums	$5 75	
From entries for races (horse)	240 00	
From State	1,049 07	
Receipts for 1897		$3,664 15
Total receipts		$3,731 54

DISBURSEMENTS.

For payment of bonds, notes or other obligations and interest		$1,309 04	
For permanent improvements		42 00	
For labor		110 03	
For material		96 42	
For salaries: Secretary, $43; office assistants, $14; police, $14; judges, $34.25		105 25	
For race purses (horses)		640 00	
For premiums on horses	$161 00		
For premiums on cattle	301 00		
For premiums on sheep	122 00		
For premiums on swine	62 00		
For premiums on poultry	50 50		
For premiums on farm produce	47 85		
For premiums on dairy products	2 90		
For premiums on domestic	248 95		
For premiums on implements and machines	46 35		
For premiums on flowers	14 60		
For premiums on fruits	29 95		
For premiums on miscellaneous	37 25		
Total premiums		1,124 35	
Total disbursements			3,427 09
Balance (credit)			$304 45

Fred. Church	President.
James H. Nickerson	Treasurer.

RIVERSIDE AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$461 88
From gate receipts	$1,790 82	
From grand stand	226 61	
From rent of privileges	402 75	
From entries for premiums	34 75	
From entries for races (horse)	243 75	
From State	1,188 98	
From National Trotting Association	13 10	
From interest, $4.66; feed sold, $7.76	12 42	
From use of sprinkler	16 00	
Receipts for 1897		$3,929 18
Total receipts		$4,391 06

DISBURSEMENTS.

One share of stock bought		$25 00
Unpaid premium 1896		1 00
For insurance		4 00
For commission sale tickets of excursion and fair		49 00
For permanent improvements		238 17
For expenses and fees National Trotting Association and State Fair Association		38 66
For labor		198 12
For material		348 86
For salaries: Secretary, $50; office assistants, $27; police, $152.62; judges, $62.75; superintendents, $27.50; total		319 87
For race purses (horses)		610 00
For special attractions "balloon"		125 00
For sundry minor expenses		31 09
For premiums on horses	$178 00	
For premiums on cattle	422 00	
For premiums on sheep	79 00	

For premiums on swine	$20 00		
For premiums on poultry	183 25		
For premiums on farm produce.	52 20		
For premiums on dairy products.	14 00		
For premiums on domestic	203 25		
For premiums on implements and machines	38 00		
For premiums on flowers	11 45		
For premiums on fruits	24 15		
For premiums on miscellaneous.	8 20		
Total premiums		$1,233 50	
Total disbursements			$3,222 27
Balance (credit)			$1,168 79

Curtis Winston .... President.
J. E. Juliand .... Treasurer.

COLUMBIA AGRICULTURAL AND HORTICULTURAL ASSOCIATION.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$21 48
From gate receipts	$2,841 45	
From rent privileges	535 20	
From entries for premiums	255 62	
For entries for races (horse)	875 00	
From State	1,112 02	
From National Trotting Association	60 50	
From rents of stable and feed during fair	78 00	
Receipts for 1897		5,757 79
Total receipts		$5,779 27

DISBURSEMENTS.

For music		$172 76	
For special attractions		300 00	
For advertising and printing		464 25	
For miscellaneous expenses		398 79	
For salaries: Secretary, $100; office assistants, $170; police, $103.99; judges, $12.50; helpers, etc., $111.13; total		497 62	
For race purses (horses)		1,790 00	
For premiums on horses	$177 00		
For premiums on cattle	138 00		
For premiums on sheep	217 00		
For premiums on swine	92 00		
For premiums on poultry	90 50		
For premiums on farm produce	33 00		
For premiums on domestic manufactures, art, etc	228 75		
For premiums on domestic	30 50		
For premiums on fruits	129 00		
Total premiums		1,135 75	
Total disbursements			$4,759 17
Balance (credit)			$1,020 10

Delbert Dinehart .... President.
Fred S. Hallenbeck .... Treasurer.

CATSKILL MOUNTAIN AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$266 17
From gate receipts	$1,473 45	
From rent of grounds	172 93	
From rent of privileges	374 89	
From entries for premiums	285 32	

From entries for races (horse)..........		$450 00	
From entries for races (bicycle or other).		8 00	
From State		830 86	
From sale of stock (balance)		16 25	
Receipts for 1897..............................			$3,611 70
Total receipts			$3,877 87

DISBURSEMENTS.

For payment on land contract..........		$346 00	
For permanent improvements		106 10	
For advertising		169 33	
For labor		165 25	
For material, lumber, etc..............		82 23	
For salaries: Secretary, $50; treasurer, $50; police, $76.18; judges, $87.75; superintendents, $86.32; helpers, etc., $23.25; total		373 50	
For race purses (horses)...............		1,134 25	
For race purses (bicycle or other) including cost of prizes..................		396 37	
For premiums on horses	$66 25		
For premiums on cattle.......	227 75		
For premiums on sheep.......	33 00		
For premiums on swine........	9 00		
For premiums on poultry......	89 37		
For premiums on farm produce.	43 62		
For premiums on dairy products	17 50		
For premiums on domestic.....	31 77		
For premiums on implements and machines	6 25		
For premiums on flowers......	40 44		

For premiums on fruits........	$44 16		
For premiums on miscellaneous.	174 03		
Total premiums		$783 14	
Total disbursements			$3,556 17
Balance (credit)			$321 70

T. Winter .... President.
J. H. Hitt .... Treasurer.

DELAWARE VALLEY AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$2,017 24	
From rent of grounds	14 15	
From rent of privileges	619 00	
From entries for premiums............	313 00	
From annual members	580 00	
From note	600 00	
From State	1,695 03	
Total receipts		$5,838 42

DISBURSEMENTS.

For payment of bonds, notes or other obligations	$1,500 00
For interest	18 00
For purchase of land..................	5,000 00
For permanent improvements	258 00
For labor	450 00
For material	650 00
For salaries: Secretary, $100; treasurer, $25; office assistants, $100; police, $15; judges, $50; superintendents, $15; helpers, etc., $15.42; total................	320 42

For premiums on horses......	$210 25		
For premiums on cattle.......	515 74		
For premiums on sheep........	104 12		
For premiums on swine.......	118 50		
For premiums on poultry......	210 59		
For premiums on farm produce.	196 98		
For premiums on dairy products.	7 75		
For premiums on domestic....	513 51		
For premiums on implements and machines	14 90		
For premiums on flowers	32 65		
For premiums on fruits........	103 95		
For premiums on miscellaneous.	13 06		
Total premiums		$2,042 00	
Total disbursements			$10,238 42
Balance (debit)			$4,400 00

A. F. Reynolds	President.
W. A. Shepard	Treasurer.

SHAVERTOWN AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$605 00	
From rent of privileges	143 96	
From entries for premiums	83 65	
From entries for races (horse)..........	10 00	
From donations	45 90	
Total receipts		$888 51

DISBURSEMENTS.

Balance due at close of fiscal year 1896..	$127 00
For rent of grounds..................	65 00

For permanent improvements, band and balloon		$135 00	
For forage and feed		9 00	
For labor		17 60	
For material		5 91	
For salaries: Secretary, $20; treasurer, $15; police, $12; judges, $35.05; total		82 05	
For race purses (horses)		25 00	
For premiums on horses	$101 25		
For premiums on cattle	103 25		
For premiums on sheep	29 50		
For premiums on swine	22 00		
For premiums on poultry	92 06		
For premiums on farm produce.	60 01		
For premiums on dairy products.	8 00		
For premiums on domestic	85 05		
For premiums on flowers	25 85		
For premiums on fruits	30 17		
For premiums on miscellaneous.	12 50		
Total premiums		569 64	
Total disbursements			$1,036 20
Balance (debit)			$147 69

H. L. More .... President.
Archie Gladstone .... Treasurer.

CAPE VINCENT AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$1,068 29
From rent of grounds	20 00
From rent of privileges	167 25

From entries for premiums	$95 75	
From entries for races (horse)	186 50	
From bonds issued, notes given or any other obligation	90 00	
From State	679 24	
From advertisements in premium list	177 50	
Receipts for 1897		$2,484 53
Total receipts		$2,484 53

DISBURSEMENTS.

For payment of bonds, notes and other obligations		$147 00
For permanent improvements		98 05
For labor		22 83
For material		47 91
For salaries: Secretary, $50; treasurer, $50; police, $49; judges, $26.50; helpers, etc., $15; total		190 50
For race purses (horses)		563 75
For race purses (bicycle or other), including cost of prizes, attractions		337 30
For printing		158 50
For traveling expenses		31 49
For miscellaneous		95 00
For premiums on horses	$118 50	
For premiums on cattle	82 50	
For premiums on sheep	29 25	
For premiums on swine	39 75	
For premiums on poultry	14 59	
For premiums on farm produce	78 48	
For premiums on dairy products	16 50	
For premiums on domestic	109 18	
For premiums on flowers	6 49	

For premiums on fruits	$28 50		
For premiums on miscellaneous.	14 98		
Total premiums		$538 72	
Total disbursements			$2,231 05
Balance (credit)			$253 48

P. S. Judd .... President.
Charles B. Wood .... Treasurer.

HEMLOCK LAKE UNION AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$410 25
From gate receipts	$652 30	
From rent of grounds	33 15	
From rent of privileges	171 20	
From annual members	819 00	
From entries from races (horse)	192 00	
From State.	753 78	
Receipts for 1897		2,621 43
Total receipts		$3,031 68

DISBURSEMENTS.

For payments of bonds, notes or other obligations, dinners for officers and judges.	$42 35	
For land rent	120 00	
For permanent improvements	177 05	
For printing	95 00	
For labor	114 02	
For material.	122 63	

For salaries: Secretary, $35; treasurer, $35; office assistants, $16; police, $46.75; superintendents, $36; helpers, etc., $10.50; total		$179 25	
For race purses (horses)		430 00	
For race purses (bicycle or other) including cost of prizes		74 15	
For band		45 00	
For premiums on horses	$108 00		
For premiums on cattle	105 00		
For premiums on sheep	140 00		
For premiums on swine	48 00		
For premiums on poultry	14 00		
For premiums on farm produce	28 25		
For premiums on dairy products	4 25		
For premiums on domestic	200 90		
For premiums on implements and machines	10 00		
For premiums on fruits	10 50		
For premiums on miscellaneous	7 75		
Total premiums		676 65	
Total disbursements			$2,076 10
Balance (credit)			$955 58

Fayette D. Short .... President.
Willis Adams .... Treasurer.

BROCKPORT UNION AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$30 21
From gate receipts	$2,519 00	

From rent of grounds	$73 45	
From rent of privileges	389 35	
From entries for races (horse)	435 00	
From bonds issued, notes given or any other obligation	100 00	
From State	1,307 63	
From advertisements in premium list	65 00	
From grand stand	286 00	
Receipts for 1897		$5,175 43
Total receipts		$5,205 64

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$800 00
For attractions		321 64
For permanent improvements		151 35
For general expenses, advertising, printing, etc.		647 01
For material		211 70
For unpaid premiums of 1896		2 50
For salaries: Secretary, $150; treasurer, $25; police, $78.37; judges, $64.45; total.		317 82
For race purses (horses)		920 00
For interest		111 25
For premiums on horses	$298 00	
For premiums on cattle	246 00	
For premiums on sheep	285 00	
For premiums on swine	123 00	
For premiums on poultry	169 00	
For premiums on farm produce	66 75	
For premiums on dairy products	9 00	
For premiums on domestic	307 25	
For premiums on flowers	18 50	

For premiums on fruits........	$100 50	
For premiums on miscellaneous.	9 50	
Total premiums	$1,632 50	
Total disbursements		$5,115 77
Balance (credit)...........................		$89 87

E. Garrison..	President.
Robert C. Hull................................	Treasurer.

BOONVILLE FAIR ASSOCIATION.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$135 77
From gate receipts......................	$1,991 70	
From received for railroad tickets.......	69 25	
From rent of privileges................	305 48	
From entries for races (horse)..........	76 25	
From State	841 87	
From advertising in premium list......	47 00	
From disbursements paid back.........	8 00	
Receipts for 1897..............................		3,339 55
Total receipts..............................		$3,475 32

DISBURSEMENTS.

For rent of grounds..................	$379 86	
For dividends	3 00	
For labor, etc.........................	976 73	
For material..........................	61 22	
For salaries: Secretary, $75; treasurer, $25; office assistants, $25; police, $54.25; judges, $29.25; superintendents, $20; president, etc., $50; total............	278 50	
For race purses (horses)...............	531 25	

For premiums on horses.......	$74 00		
For premiums on cattle........	287 00		
For premiums on sheep........	13 00		
For premiums on swine........	29 00		
For premiums on poultry......	48 50		
For premiums on farm produce..	37 00		
For premiums on dairy products.	10 00		
For premiums on domestic.....	143 25		
For premiums on culinary.....	34 50		
For premiums on flowers......	40 50		
For premiums on fruits........	17 00		
For premiums on miscellaneous.	50 50		
Total premiums		$784 25	
Total disbursements			$3,014 81
Balance (credit)			$460 51

Benjamin A. Capron.............................. President.
E. G. Palmer..................................... Treasurer.

PHOENIX UNION AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896.......		$50 33
From gate receipts	$926 35	
From rent of privileges................	144 75	
From annual members................	260 00	
From entries for races (horse)..........	190 00	
From donations	50 00	
Receipts for 1897		1,571 10
Total receipts		$1,621 43

DISBURSEMENTS.

For rent of fair grounds		$100 00	
For labor		111 81	
For material		318 96	
For salaries: Secretary, $50; treasurer, $15; office assistants, $14; police, $36.25; superintendents, $47.07; total		162 32	
For race purses (horses)		375 00	
For race purses (bicycle or other) including cost of prizes, horseless wagon race.		100 00	
For premiums on horses	$102 00		
For premiums on cattle	135 50		
For premiums on sheep	32 00		
For premiums on swine	31 00		
For premiums on poultry	35 50		
For premiums on farm produce.	26 75		
For premiums on dairy products.	1 50		
For premiums on domestic	49 75		
For premiums on flowers	9 25		
For premiums on fruits	30 50		
For premiums on miscellaneous.	52 75		
Total premiums		506 50	
Total disbursements			$1,674 59
Balance (debit)			$53 16

John O'Brien	President.
N. A. Hughes	Treasurer.

GORHAM AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$385 25
From rent of grounds	22 29

From rent of privileges	$57 40	
From entries for premiums	1 87	
From annual members	155 00	
From entries for races (horse)	22 00	
From entries for races (bicycle or other).	1 25	
From donations, per W. W. Cox, $3; advertising $170; total	173 00	
From State	674 45	
From sale of stove	10 00	
Receipts for 1897		$1,502 51
Total receipts		$1,502 51

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$233 79
For labor		51 25
For material		84 14
For salaries: Secretary, $10.60; treasurer, $17.40; office assistants, $9.75; police, $5.25; helpers, etc., $13; total		56 00
For race purses (horses)		105 00
For race purses (bicycle or other) including cost of prizes		14 75
For premiums on horses	$221 00	
For premiums on cattle	71 50	
For premiums on sheep	41 00	
For premiums on swine	23 00	
For premiums on poultry	10 00	
For premiums on farm produce.	50 75	
For premiums on dairy products.	8 25	
For premiums on domestic	104 55	
For premiums on implements and machines	12 50	

For premiums on flowers	$5 25		
For premiums on fruits	33 55		
Total premiums		$581 35	
Total disbursements			$1,126 28
Balance (credit)			$376 23

W. Murray Witter	President.
H. C. Wood	Treasurer.

NAPLES UNION AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$603 96
From gate receipts	$1,101 05	
From rent of privileges	145 50	
From annual members	150 00	
From entries for races (horse)	235 00	
From State	781 93	
From advertising premium list	49 50	
Receipts for 1897		2,462 98
Total receipts		$3,066 94

DISBURSEMENTS.

For printing	$104 60
For insurance	66 00
For permanent improvements	430 19
For band, $75; State Association, $5	80 00
For labor	82 41
For material	51 39
For race purses (horses)	628 56
For race purses (bicycle or other) including cost of prizes	146 17
For rent of grounds	135 00

For premiums on horses	$132 00		
For premiums on cattle	42 00		
For premiums on sheep	125 00		
For premiums on swine	16 00		
For premiums on poultry	54 00		
For premiums on farm produce	90 75		
For premiums on dairy products	6 25		
For premiums on domestic	113 75		
For premiums on implements and machines	4 00		
For premiums on flowers	3 00		
For premiums on fruits	72 25		
For premiums on miscellaneous	22 25		
Total premiums		$681 25	
Total disbursements			$2,405 57
Balance (credit)			$661 87

John Bolles .... President.
D. J. Doughty .... Treasurer.

SANDY CREEK, RICHLAND, ORWELL AND BOYLSTON AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$1,026 40
From gate receipts	$652 95	
From rent of privileges	426 40	
From annual members	1,469 00	
From life members	10 00	
From entries for races (horse)	238 00	
From State	1,228 75	
From grand stand receipts	286 60	
Receipts for 1897		4,311 70
Total receipts		$5,338 10

DISBURSEMENTS.

For 5 per cent. race entries left in treasurer's hands		$105 50	
For music and entertainment		468 23	
For printing and advertising		251 04	
For permanent improvements		820 11	
For insurance, $12; membership fee T. F. association, $5; total		17 00	
For labor		144 65	
For material		176 69	
For salaries: Secretary, $75; treasurer, $6; office assistants, $77.50; police, $70; judges, $16.10; superintendents, $113.37; total		357 97	
For race purses (horses)		459 50	
For race purses (bicycle or other), including cost of prizes		32 40	
For expenses of delegates attending State Town Fair Association		20 00	
For premiums on horses	$182 00		
For premiums on cattle	542 00		
For premiums on sheep	65 75		
For premiums on swine	85 00		
For premiums on poultry	52 50		
For premiums on farm produce	57 75		
For premiums on dairy products	7 00		
For premiums on domestic	226 63		
For premiums on flowers	48 75		
For premiums on fruits	22 00		
For premiums on miscellaneous	77 25		
Total premiums		1,366 63	
Total disbursements			$4,219 72
Balance (credit)			$1,118 38

John R. Allen, President.
George T. Smith Treasurer.

BUTTERNUT VALLEY AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$895 73
From gate receipts	$2,604 16	
From rent of grounds	20 00	
From rent of privileges	386 75	
From hay and oats	69 00	
From advertising in premium list	7 00	
From entries for races (horse)	95 00	
From State	1,608 25	
Receipts for 1897		4,790 16
Total receipts		$5,685 89

DISBURSEMENTS.

For printing		$86 85
For taxes, $16.41; music, $100; total		116 41
For balloon, $100; ball game, $40; acrobats, $40; total		180 00
For permanent improvements		269 43
For dividends		353 00
For labor		147 55
For material		125 70
For salaries: Secretary, $20; treasurer, $25; office assistants, $65.55; police, $38.75; judges, $59.29; superintendents, $115.50; helpers, etc., $38; total		362 09
For race purses (horses)		262 00
For premiums on horses	$138 00	
For premiums on cattle	514 50	
For premiums on sheep	144 50	
For premiums on swine	115 00	
For premiums on poultry	154 95	
For premiums on farm produce	137 55	
For premiums on dairy products	20 50	

For premiums on domestic....	$418 45		
For premiums on implements and machines	68 15		
For premiums on flowers......	76 20		
For premiums on fruits........	38 75		
For premiums on miscellaneous.	88 10		
Total premiums		$1,914 65	
Total disbursements			$3,819 68
Balance (credit)			$1,868 21

Chas. A. Bowne..............................	President.
D. I. Laurence..............................	Treasurer.

ONEONTA UNION AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896......		$956 07
From gate receipts....................	$3,425 87	
From rent of grounds..................	92 19	
From rent of privileges.................	532 00	
From entries for premiums............	316 71	
From annual members................	162 00	
From entries for races (horse).........	696 25	
From bonds issued, notes given or any other obligation (on note)...........	700 00	
From State...........................	1,363 52	
From advertising......................	460 55	
From feed and space..................	62 50	
Receipts for 1897..............................		7,811 59
Total receipts.		$8,767 66

DISBURSEMENTS.

For payment of bonds, notes or other obligations (hay and grain)............	$111 06	
For purchase of land (advertising)......	566 60	

For permanent improvements		$2,393 89	
For miscellaneous accounts		869 70	
For material		723 34	
For labor		442 83	
For salaries: Secretary, $100; treasurer, $25; office assistants, $13.50; police, $79.75; judges, $48; superintendents, $48.60; helpers, etc., $49.50; total		364 35	
For race purses (horses)		1,300 00	
For premiums on horses	$258 00		
For premiums on cattle	637 00		
For premiums on sheep	80 50		
For premiums on swine	28 00		
For premiums on poultry	40 75		
For premiums on farm produce	195 30		
For premiums on dairy products	69 00		
For premiums on domestic	309 30		
For premiums on implements and machines	65 00		
For premiums on flowers	193 00		
For premiums on fruits	48 75		
For premiums on miscellaneous	25 00		
Total premiums		1,949 60	
Total disbursements			$8,721 37
Balance (credit)			$46 29

Walter L. Brown .... President.
H. M. Bard .... Treasurer.

RICHFIELD SPRINGS AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$259 83
From gate receipts	$1,099 60	
From rent of privileges	269 50	

From annual members		$200 00	
From entries for races (horse)		124 50	
From State		856 56	
Receipts for 1897			$2,550 16
Total receipts			$2,809 99

DISBURSEMENTS.

For entertainments		$259 00	
For clerks		32 00	
For rent		200 00	
For labor		250 43	
For material		92 12	
For salaries: Secretary, $40; treasurer, $25; police, $54.25; judges, $31.80; total		151 05	
For race purses (horses)		480 00	
For premiums on horses	$89 00		
For premiums on cattle	150 00		
For premiums on sheep	72 00		
For premiums on swine	55 00		
For premiums on poultry	29 25		
For premiums on farm produce	45 25		
For premiums on dairy products	32 75		
For premiums on domestic	138 20		
For premiums on flowers	21 25		
For premiums on fruits	14 25		
For premiums on miscellaneous	150 35		
Total premiums		797 30	
Total disbursements			2,261 90
Balance (credit)			$548 09

William Rose	**President.**
George T. Brockway	**Treasurer.**

SCHENEVUS VALLEY AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896	$2 64	
From gate receipts	659 88	
From rent of privileges	163 70	
From entries for premiums	11 75	
From annual members	81 00	
From entries for races (horse)	120 00	
From donations	25 00	
From State	674 95	
Total receipts		$1,738 92

DISBURSEMENTS.

For postage and miscellaneous		$21 85
For payment of bonds, notes or other obligations		74 50
For rent of land		100 00
For advertising		74 40
For music and attractions		215 00
For labor		32 14
For material		20 73
For salaries: Secretary, $25; treasurer, $6; office assistants, $26; police, $19; judges, $7; superintendents, $18; helpers, etc., $3; total		104 00
For race purses (horses)		355 00
For race purses (bicycle or other) including cost of prizes		24 55
For premiums on horses	$63 00	
For premiums on cattle	134 75	
For premiums on sheep	44 00	
For premiums on swine	10 00	
For premiums on poultry	49 00	
For premiums on farm produce	19 40	

For premiums on dairy products	$4 50		
For premiums on domestic	114 25		
For premiums on implements and machines	6 00		
For premiums on flowers	13 25		
For premiums on fruits	8 00		
For premiums on miscellaneous	70 80		
Total premiums		$536 95	
Total disbursements			$1,559 12
Balance (credit)			$179 80

Charles H. Graham .... President.
E. J. Goddard .... Treasurer.

ROCKLAND COUNTY INDUSTRIAL ASSOCIATION.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$31 83
From gate receipts	$541 90	
From rent of privileges	203 00	
From annual members	253 00	
From entries for races (horse)	700 00	
From donations	21 00	
From bonds issued, notes given or any other obligation	100 00	
From State	678 23	
From dues paid from 1896	10 00	
Receipts for 1897		2,507 13
Total receipts		$2,538 96

DISBURSEMENTS.

For rent of fair grounds	$100 00
For band	100 00
For labor	152 90

For material		$287 40	
For salaries: Office assistants, $40.50; police, $7.50; helpers, etc., $42.50; total		90 50	
For race purses (horses)		1,170 00	
For race purses (bicycle or other) including cost of prizes		26 00	
For premiums on horses	$121 00		
For premiums on cattle	139 00		
For premiums on sheep	8 00		
For premiums on swine	9 00		
For premiums on poultry	24 00		
For premiums on farm produce	62 00		
For premiums on dairy products	3 75		
For premiums on domestic	166 50		
For premiums on flowers	39 00		
For premiums on fruits	36 75		
For premiums on miscellaneous	75		
Total premiums		$609 75	
Total disbursements			$2,536 55
Balance (credit)			$2 41

Jacob E. Vanderbilt................................ President.
Marsh S. Cropsey................................ Treasurer.

GOUVERNEUR AGRICULTURAL AND MECHANICAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$168 34
From gate receipts	$2,839 20	
From rent of grounds	73 30	
From rent of privileges	555 75	
From entries for premiums	153 00	
From entries for races (horse)	802 50	

From bonds issued, notes given or any other obligation (note)		$300 00	
From overpayment of premiums, 1895		15 50	
Receipts for 1897			$4,739 25
Total receipts			$4,907 59

DISBURSEMENTS.

For interest on mortgage and notes		$284 63	
For labor		237 41	
For material		360 75	
For salaries: Secretary, $100; treasurer, $50; office assistants, $80.50; police, $129.25; judges, $49.17; superintendents, $99.50; helpers, etc., $1,150.56; total		1,658 98	
For race purses (horses)		1,535 00	
For premiums on horses	$62 00		
For premiums on cattle	268 00		
For premiums on sheep	37 00		
For premiums on swine	43 00		
For premiums on poultry	112 00		
For premiums on farm produce	51 75		
For premiums on dairy products	29 00		
For premiums on domestic	49 75		
For premiums on implements and machines	6 00		
For premiums on flowers	24 50		
For premiums on fruits	7 25		
For premiums on miscellaneous	109 75		
Total premiums		800 00	
Total disbursements			4,876 77
Balance (credit)			$30 82

J. H. Abbott .... President.
T. J. Whitney .... Treasurer.

RACKET VALLEY AND ST. REGIS VALLEY AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$472 18
From gate receipts	$1,811 15	
From rent of grounds	570 19	
From rent of privileges	161 58	
From entries for premiums and annual members	700 00	
From entries for races (horse)...........	2,768 50	
From State	1,410 14	
From grand stand	700 45	
From National Trotting Association....	18 00	
From miscellaneous	46 67	
Receipts for 1897		8,186 68
Total receipts		$8,658 86

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$461 24
For permanent improvements...........		52 62
For labor		526 31
For material		56 77
For salaries: Secretary, $100; treasurer, $100; office assistants, $96.65; police, $137.37; clerks to judges, $11; superintendents, $100; total.................		545 02
For race purses (horses), National Trotting Association dues, etc............		3,870 00
For race purses (bicycle or other), including cost of prizes..................		1,496 70
For unpaid premiums for 1896.........		5 00
For premiums on horses.......	$187 00	
For premiums on cattle.......	336 00	
For premiums on sheep........	125 00	

For premiums on swine	$68 00		
For premiums on poultry	24 25		
For premiums on farm produce	90 25		
For premiums on dairy products	82 00		
For premiums on domestic	245 20		
For premiums on implements and machines	56 25		
For premiums on flowers	82 00		
For premiums on fruits	24 50		
For premiums on miscellaneous	201 35		
Total premiums		$1,551 80	
Total disbursements			$8,565 46
Balance (credit)			$93 40

Frederic A. Ward .... President.
Geo. R. C. Smith .... Treasurer.

COBLESKILL AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$73 04
From gate receipts	$1,537 30	
From rent of grounds	161 64	
From rent of privileges	616 00	
From annual members	799 00	
From entries for races (horse)	220 00	
From bonds issued, notes given or any other obligation	3,500 00	
From State	1,478 18	
From suspensions	106 00	
From advertising in premium list	58 50	
From miscellaneous	17 41	
Receipts for 1897		8,494 03
Total receipts		$8,567 07

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$2,440 75	
For permanent improvements		711 70	
For labor		285 77	
For salaries: Office assistants, $69.53; police, $62.49; judges, $132; superintendents, $208.74; helpers, etc., $50.87; total		523 63	
For race purses (horses)		550 00	
For hippodrome		400 00	
For music, insurance, printing, etc		565 70	
For premiums on horses	$387 00		
For premiums on cattle	706 46		
For premiums on sheep	201 85		
For premiums on swine	136 50		
For premiums on poultry	381 42		
For premiums on farm produce.	235 47		
For premiums on dairy products	17 65		
For premiums on domestic	556 43		
For premiums on implements and machines	44 25		
For premiums on flowers	14 64		
For premiums on fruits	209 67		
For premiums on miscellaneous.	115 99		
Total premiums		3,007 33	
Total disbursements			$8,484 88
Balance (credit)			$82 19

O. F. Nelson .... President.
M. D. Borst .... Treasurer.

PRATTSBURGH UNION AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$1 50
From gate receipts..........................	$406 70	
From rent of privileges.................	21 75	
From entries for premiums............	101 50	
From entries for races (horse)..........	67 50	
From donations........................	22 50	
From bonds issued, notes given or any other obligation.	500 00	
From State.	726 49	
From advertising in premium list and other sources	25 00	
Total receipts.		1,872 94

DISBURSEMENTS.

For payment of bonds, notes or other obligations.		$151 98
For permanent improvements..........		50 00
For unpaid premiums of 1896..........		12.65
For labor, music, etc..................		113 26
For material, including printing........		406 12
For salaries: Secretary, $50; office assistants, $26; police, $13.50; judges, $1; total.		89 50
For race purses (horses)...............		289 07
For rent of grounds, stables, etc........		225 00
For premiums on horses......	$78 00	
For premiums on cattle.......	73 00	
For premiums on sheep........	107 00	
For premiums on swine........	35 00	
For premiums on poultry......	25 75	
For premiums on farm produce.	56 15	
For premiums on dairy products.	8 50	
For premiums on domestic.....	47 25	

For premiums on implements and machines	$1 00		
For premiums on flowers	7 50		
For premiums on fruits	39 50		
For premiums on miscellaneous	50 75		
Total premiums		$529 40	
Total disbursements			$1,866 98
Balance (credit)			$5 96

Henry S. Horton	President.
William G. Dean	Treasurer.

SOUTHERN STEUBEN AGRICULTURAL SOCIETY.

RECEIPTS.

From gate receipts	$355 40	
From rent of privileges	50 00	
From entries for premiums	100 00	
From entries for races (horse)	46 12	
From State	750 84	
Receipts for 1897		$1,302 36
Total receipts		$1,302 36

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$53 71
For permanent improvements		52 00
For labor		266 19
For salaries: Secretary, $28.10; treasurer, $20; total		48 10
For race purses (horses)		141 87
For premiums on horses	$98 00	
For premiums on cattle	90 00	
For premiums on sheep	80 00	

For premiums on swine	$42 00		
For premiums on poultry	31 75		
For premiums on farm produce.	21 50		
For premiums on dairy products.	29 50		
For premiums on domestic	61 75		
For premiums on implements and machines	8 00		
For premiums on flowers	15 00		
For premiums on fruits	12 00		
For premiums on miscellaneous.	58 75		
Total premiums		$548 25	
Total disbursements			$1,110 12
Balance (credit)			$192 24

Henry Simpson .... President.
W. N. Griggs .... Treasurer.

NORTHERN TIOGA.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$562 01
From gate receipts	$1,373 70	
From rent of grounds	6 00	
From rent of privileges	306 50	
From grand stand	180 45	
From fines	9 00	
From entries for races (horse)	312 75	
From State	865 81	
Receipts for 1897		3,054 21
Total receipts		$3,616 22

DISBURSEMENTS.

For rent of grounds, $155; hall for meetings, $2; total		$157 00	
For permanent improvements		650 00	
For band and other amusements		110 00	
For labor		246 63	
For material, $51.09; forage, $81.66; insurance, $7.50; fees, $15; total		155 25	
For salaries: Secretary, $50; printing, $99.50; expenses, $30.84; police, $10.50; judges, $40.50; helpers, etc., $44.90; total		276 24	
For race purses (horses)		710 00	
For race purses (foot and ball players), including cost of prizes		101 66	
For premiums on horses	$112 00		
For premiums on cattle	254 75		
For premiums on sheep	77 75		
For premiums on swine	26 00		
For premiums on poultry	108 75		
For premiums on farm produce	16 50		
For premiums on dairy products	24 75		
For premiums on domestic	152 30		
For premiums on implements and machines	13 50		
For premiums on flowers	11 40		
For premiums on fruits	27 50		
For premiums on miscellaneous	39 70		
Total premiums		864 90	
Total disbursements			$3,271 68
Balance (credit)			$344 54

Stephen L. Ball .... President
E. F. Belden .... Treasurer

DRYDEN AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896........		$33 26
From gate receipts....................	$2,473 73	
From rent of privileges................	485 50	
From entries for premiums............	8 01	
From entries for races (horse)..........	496 00	
From bonds issued, notes given or any other obligation	125 00	
From State	1,038 58	
From grand stand......................	235 80	
From other receipts	249 56	
Receipts for 1897..............................		5,112 18
Total receipts		$5,145 44

DISBURSEMENTS.

For payment of bonds, notes or other obligations		$319 50
For purchase of land		365 40
For permanent improvements		475 04
For labor		141 70
For material		420 94
For salaries: Secretary, $50; treasurer, $20; office assistants, $37.75; police, $62.25; judges, $56.95; superintendents, $35.25; helpers, etc., $22.87; total.....		285 07
For race purses (horses)................		980 00
For race purses (bicycle or other) $22.50; ladies driving contest, $15; total......		37 50
For advertising, $434.57; other expenses, $305.14		739 71
For premiums on horses.......	$102 00	
For premiums on cattle........	284 25	
For premiums on sheep........	123 25	
For premiums on swine........	55 50	

For premiums on poultry	$201 95		
For premiums on farm produce	76 75		
For premiums on dairy products	22 25		
For premiums on domestic	264 20		
For premiums on implements and machines	10 00		
For premiums on flowers	40 05		
For premiums on fruits	45 05		
For premiums on miscellaneous	118 65		
Total premiums		$1,343 90	
Total disbursements			$5,108 76
Balance (credit)			$36 68

S. G. Lupton .... President.
D. T. Wheeler .... Treasurer.

NEWARK DRIVING PARK ASSOCIATION.

RECEIPTS.

From gate receipts	$1,245 50	
From rent of privileges	184 07	
From entries for premiums	135 00	
From entries for races (horse)	30 00	
From entries for races (bicycle or other)	4 00	
From capital stock	6,000 00	
From bond and mortgage	6,500 00	
Receipts for 1897		$14,098 57
Total receipts		$14,098 57

DISBURSEMENTS.

For purchase of land	$10,650 00
For permanent improvements	1,850 00
For advertising and attractions	98 00
For labor	138 45

For material		$256 85	
For salaries: Secretary, $60; office assistants, $48; police, $45.50; judges, $36; superintendents, $54; total		243 50	
For race purses (horses)		185 00	
For race purses (bicycle or other), including cost of prizes		20 00	
For premiums on horses	$117 50		
For premiums on cattle	123 30		
For premiums on sheep	69 25		
For premiums on swine	54 25		
For premiums on poultry	162 25		
For premiums on farm produce	33 50		
For premiums on dairy products	2 00		
For premiums on domestic	45 00		
For premiums on implements and machines	28 00		
For premiums on flowers	7 00		
For premiums on fruits	20 00		
For premiums on miscellaneous	76 27		
Total premiums		738 32	
Total disbursements			$14,180 12
Balance (credit)			$81 55

Newell E. Landon	President.
Luther Finley	Treasurer.

UNION AGRICULTURAL AND HORTICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$20 91
From gate receipts	$1,202 12	
From rent of grounds	25 00	
From rent of privileges	163 50	

From entries for premiums	$226 00	
From entries for races (horse)	368 83	
From donations	128 80	
From State	749 15	
From base ball	2 20	
From grand stand	181 54	
From advertising	102 50	
Receipts for 1897		$3,149 64
Total receipts		$3,170 55

DISBURSEMENTS.

For permanent improvements		$1,118 79	
For salaries: Police, $63.50; judges, $34.15; helpers, etc., $10; total		107 65	
For race purses (horses)		830 00	
For ball game		40 00	
For printing		169 45	
For incidental expenses		247 49	
For rent of ground		125 00	
For premiums on horses	$155 50		
For premiums on cattle	81 50		
For premiums on sheep	88 00		
For premiums on swine	42 50		
For premiums on poultry	77 25		
For premiums on farm produce	15 25		
For premiums on domestic	116 25		
For premiums on flowers	8 50		
For premiums on fruits	15 75		
For premiums on miscellaneous	154 80		
Total premiums		755 30	
Total disbursements			3,393 68
Balance (debit)			$223 13

J. T. Howe .... President.
H. A. Mosher .... Treasurer.

PALMYRA UNION AGRICULTURAL SOCIETY.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$1,286 51
From rent of grounds	$70 00	
From rent of privileges and annual members	1,964 36	
From State	1,053 09	
From interest on loan	50 30	
Receipts for 1897		3,137 75
Total receipts		$4,424 26

DISBURSEMENTS.

For annual dues		$5 00
For permanent improvements		382 50
For labor		91 53
For material		119 10
For salaries: Secretary, $25; treasurer, $25; office assistants, $36; police, $10; judges, $15; superintendents, $10; helpers, etc., $15; total		136 00
For race purses (horses)		156 00
For race purses (bicycle or other), including cost of prizes		22 64
For band, $45; printing, $55.12; insurance, $50.25; hay, $29.40; delegate's expenses, $22.53; sundries, $28.88; total.		232 18
For premiums on horses	$234 00	
For premiums on cattle	249 00	
For premiums on sheep	142 00	
For premiums on swine	80 00	
For premiums on poultry	169 00	
For premiums on farm produce.	64 75	
For premiums on dairy products.	6 00	
For premiums on domestic	8 75	
For premiums on implements and machines	64 00	

For premiums on flowers	$20 75		
For premiums on fruits	33 75		
For premiums on miscellaneous	157 25		
Total premiums		$1,229 25	
Total disbursements			$2,374 20
Balance (credit)			$2,050 06

Charles D. Johnson .... President.

Harry G. Chapman .... Treasurer.

SILVER LAKE AGRICULTURAL AND MECHANICAL ASSOCIATION.

RECEIPTS.

From gate receipts	$1,159 30	
From grand stand	135 55	
From rent of privileges	105 75	
From entries for races (horse)	156 66	
From entries for races (bicycle or other)	16 50	
From bonds issued, notes given or any other obligation	325 00	
From State	737 45	
Receipts for 1897		$2,636 21
Total receipts		$2,636 21

DISBURSEMENTS.

Balance due at close of fiscal year 1896	$22 95
For payment of bonds, notes or other obligations	693 62
For hay and straw, $37.63; printing, $50.90; insurance, $12.00	100 53
For special attractions	110 00
For sundries, as postage, L. A. W. sanction	35 87
For labor	47 20

For material		$13 73	
For salaries: Secretary, $50; treasurer, $25; office assistants, $14; police, $8; judges, $53.45; total		150 45	
For race purses (horses)		382 50	
For race purses (bicycle or other) including cost of prizes		68 10	
For premiums on horses	$172 00		
For premiums on cattle	167 00		
For premiums on sheep	166 00		
For premiums on swine	54 00		
For premiums on poultry	54 00		
For premiums on farm produce.	9 75		
For premiums on dairy products.	8 00		
For premiums on domestic	44 75		
For premiums on implements and machines	7 75		
For premiums on flowers	4 25		
For premiums on fruits	8 75		
Total premiums		696 25	
Total disbursements			$2,321 20
Balance (credit)			$315 01

L. A. Macomber	President.
John H. Watson	Treasurer.

DUNDEE FAIR ASSOCIATION.

RECEIPTS.

Balance on hand at close of fiscal year 1896		$249 57
From gate receipts	$1,164 90	
From rent of privileges	266 00	
From entries for races (horse)	152 50	
From donations	62 50	

From State		$718 63	
From advertising in premium list		22 00	
Receipts for 1897			$2,386 53
Total receipts			$2,636 10

DISBURSEMENTS.

For rent of grounds		$100 00	
For National Trotting Association		10 00	
For balloon ascension and bands		222 98	
For labor		1 50	
For material		125 62	
For salaries: Secretary, $52.20; treasurer, $25; office assistants, $29; police, $46.50; judges, $15; superintendents, $35.13; helpers, etc., $32.50; total		235 33	
For race purses (horses)		645 50	
For premiums on horses	$79 00		
For premiums on cattle	74 00		
For premiums on sheep	92 50		
For premiums on swine	15 00		
For premiums on poultry	89 00		
For premiums on farm produce	6 00		
For premiums on dairy products	4 50		
For premiums on domestic	120 00		
For premiums on implements and machines	1 00		
For premiums on flowers	9 25		
For premiums on fruits	66 25		
For premiums on miscellaneous	32 25		
Total premiums		588 75	
Total disbursements			1,929 68
Balance (credit)			706 42

Andrew Harpending .... President.

Charles J. Watson.............................. Treasurer.

Names and Official Addresses of the Secretary of Agriculture of the United States, and Agricultural and Dairy Commissioners of the Several States.

UNITED STATES.

Secretary of Agriculture.—James Wilson, Washington, D. C.; J. H. Brigham, Assistant Secretary.

ALABAMA.

Commissioner of Agriculture.—H. D. Lane, Montgomery, Ala.

CALIFORNIA.

State Dairy Bureau.—Wm. Vanderbilt, Secretary, 113 Davis street, San Francisco, Cal.

COLORADO.

State Dairy Commissioner.—H. B. Cannon, Denver, Col.

State Board of Agriculture.—Daniel W. Working, B. S., Secretary, Denver, Col.

CONNECTICUT.

Dairy Commissioner.—John B. Noble, Hartford, Conn.

State Board of Agriculture.—T. S. Gold, Secretary, West Cornwall, Conn.

GEORGIA.

Commissioner of Agriculture.—R. T. Nesbitt, Atlanta, Ga. The Commissioner of Agriculture has nothing to do with dairy products or vinegar.

IOWA.

State Dairy Commissioner.—B. P. Norton, Des Moines, Ia.

KANSAS.

State Board of Agriculture.—F. D. Coburn, Secretary, Topeka, Kan.

KENTUCKY.

Commissioner of Agriculture.—Lucas Moore, Frankfort, Ky.

LOUISIANA.

Commissioner of Agriculture and Immigration.—J. G. Lee, Baton Rouge, La.

MASSACHUSETTS.

Dairy Bureau, Commissioners.— C. L. Hartshorn, Worcester, Mass.; Geo. L. Clemens, Southbridge, Mass.; D. A. Norton, Northampton, Mass. Executive Officer, Geo. M. Whitaker, Boston, Mass.

State Board of Agriculture.— Secretary, Wm. R. Sessions, Boston, Mass.

MAINE.

State Board of Agriculture.—B. Walker McKeen, Secretary, Augusta, Me.

MICHIGAN.

Dairy and Food Commissioner.—Elliot O. Grosvenor, Lansing, Mich.

State Board of Agriculture.— Ira H. Butterfield, Secretary, Agricultural College, Mich.

MINNESOTA.

Dairy and Food Commissioner.— Berndt Anderson, St. Paul, Minn.; Assistant Commissioner, J. A. Lawrence, Northfield, Minn.

MISSOURI.

State Board of Agriculture.— Alexander Maitland, President; G. A. Ely, Sublett, Mo.; John R. Rippey, Secretary, Columbia, Mo.

MONTANA.

State Bureau of Agriculture.—James H. Mills, Commissioner, Helena, Mont.

NEW HAMPSHIRE.

State Board of Agriculture.— Nahum J. Bachelder, Secretary, Concord, N. H.

NEW JERSEY.

Dairy Commissioner.— George W. McGuire, Trenton, N. J.

NEW YORK.

Commissioner of Agriculture.— Charles A. Wieting, Albany, N. Y.

NORTH CAROLINA.

Commissioner of Agriculture.— S. F. Patterson, Raleigh, N. C.

NORTH DAKOTA.

Commissioner of Agriculture.—H. H. Thomas, Bismarck, N. D., ex-officio State Dairy Commissioner.

OHIO.

Dairy and Food Commissioner.—Joseph E. Blackburn, Columbus, Ohio.

OREGON.

Dairy and Food Commissioner.—H. B. Luce, Portland, Ore.

PENNSYLVANIA.

Department of Agriculture.— Thos. J. Edge, Secretary, Harrisburg, Pa.

Dairy and Food Commissioner.— Major Levi Wells, Harrisburg, Pa.; Deputy Dairy and Food Commissioner, A. F. Seebold, Philadelphia, Pa.

RHODE ISLAND.

State Board of Agriculture.—George A. Stockwell, Secretary, Providence, R. I.

TENNESSEE.

Commissioner of Agriculture.—T. F. P. Allison, Nashville, Tenn.

TEXAS.

Commissioner of Agriculture.—John E. Hollingsworth, Austin, Tex.

UTAH.

State Dairy and Food Commissioner.—H. J. Faust, Jr., Salt Lake City, Utah.

VIRGINIA.

Department of Agriculture.—Thos. Whitehead, Commissioner, Richmond, Va.

WASHINGTON.

State Dairy Commissioner.—E. A. McDonald, Tacoma, Wash.

WEST VIRGINIA.

State Board of Agriculture.—T. C. Atkeson, President, Buffalo, W. Va.; C. C. Brown, Secretary, Charleston, W. Va.

WISCONSIN.

Dairy and Food Commissioner.—H. C. Adams, Madison, Wis.; Assistant Commissioner, W. W. Chadwick, Monroe, Wis.

CANADA.

Dairy Commissioner.—Prof. James W. Robertson, Ottawa, Can.; Assistant Dairy Commissioner, J. C. Chapais, St. Denis, Quebec.

ONTARIO.

Department of Agriculture.— John Dryden, Minister of Agriculture, Toronto.

MANITOBA.

Dairy Association.—Miss E. Cora Hind, Secretary and Treasurer, 364 Main street, Winnipeg, Manitoba.

MILK STANDARD.

GEORGIA.

Skimmed Milk.

Milk which contains less than 3½ per cent. of butter fat and 8½ per cent. of other solids (other than butter fat), shall be regarded as skimmed or partially skimmed milk. (Laws 1895, chap. 207.) Law took effect January 1, 1896.

ILLINOIS.

88 per cent. water.

12 per cent. milk solids.

3 per cent. butter fat.

Contracts for purchase of milk within this State, for delivery within or without this State, is governed by this standard, except by special contract in writing. (Laws 1897, p. 268.)

IOWA.

There must be at least 3 pounds of butter fat to each 100 pounds of milk. (Laws 1892, chap. 50, § 2.)

MAINE.

88 per cent. water.

12 per cent. milk solids.

3 per cent. fat.

By gravimetric analysis. (Laws 1893, chap. 255.)

MASSACHUSETTS.

87 per cent. watery fluid.

13 per cent. of milk solids.

Nine and three-tenths per cent. of milk solids, exclusive of fat, or three and seven-tenths per cent. of fat; except during the months of April, May, June, July and August, when milk shall not contain less than 12 per cent.of milk solids or less than 9 per cent. of milk solids exclusive of fat, or less than 3 per cent. of fat. (Laws 1896, chap. 398.)

Skimmed Milk.

Skimmed milk must contain at least 9.3 per cent. milk solids. (Laws 1885, chap. 352.)

MICHIGAN.

87½ per cent. watery fluid.

12½ per cent. milk solids.

3 per cent. fat.

Specific gravity, at 60 degrees Fahrenheit, between 1.029 and 1.033. (Laws 1889, act 219.)

MINNESOTA.

87 per cent. water.
13 per cent. milk solids.
3½ per cent. fat.
(Laws 1897, chap. 119.)

NEW HAMPSHIRE.

87 per cent. watery fluid.
13 per cent. milk solids.
(Laws 1883, chap. 42.)

NEW JERSEY.

88 per cent. water.
12 per cent. solids.
(Laws 1882, chap. 82.)

NEW YORK.

88 per cent. water or fluids.
12 per cent. milk solids.
3 per cent. fat.
(Laws 1893, chap. 338, art. II, § 20.)

Condensed Milk.

The proportion of milk solids in condensed milk must be the equivalent of 12 per centum of milk solids in crude milk, of which solids 25 per centum must be fat. (Laws 1894, chap. 143, amending Laws 1893, chap. 338, art. II, § 25.)

OHIO.

88 per cent. of watery fluid.

12 per cent. of solids, not less than one-fourth of which must be fat; except during the months of May and June, when there must be not less than 11½ per cent. of milk solids. (Laws 1896, p. 149.)

Condensed Milk.

There must be the equivalent of 12 per centum of milk solids in crude milk; of such solids 25 per centum must be fat. (Laws 1886, p. 180.)

OREGON.

88 per cent water.

12 per cent. volume of cream.

3 per cent. fat.

Specific gravity, after removal of cream, 1.035. (Laws 1893, p. 99.)

PENNSYLVANIA.

87½ per centum watery fluid.

12½ per centum milk solids.

3 per centum fat.

Specific gravity, at 60 degrees Fahrenheit, between 1.029 and 1.033. (Laws 1885, No. 186.)

Skimmed Milk.

6 per centum of cream by volume.

2½ per centum of fat, by weight.

Specific gravity, at 60 degrees Fahrenheit, between 1.032 and 1.037. (Laws 1885, No. 186.)

SOUTH CAROLINA.

Skimmed Milk.

Milk which contains less than 3 per centum of butter fat and 8½ per centum of solids other than butter fat shall be regarded as skimmed milk. (Laws 1896, No. 96, p. 215.)

VERMONT.

12½ per cent. of total solids.

9¼ per cent. of total solids, not fat.

In the months of May and June there must be at least 12 per cent. of total solids. (Laws 1888, No. 108.)

In all creameries and cheese factories milk containing 4 per cent. of butter fat shall be the standard used as a paying basis. (Laws 1894, No. 113.)

WASHINGTON.

3 per cent. pure butter fat.

8 per cent. milk solids other than fat.

WISCONSIN.

Milk containing 3 per cent. of fat is merchantable milk, provided it has not been diluted or cream abstracted, and is drawn from healthy cows. (Laws 1889, chap. 425.)

CANADA (PROVINCE OF ONTARIO).

All milk containing less than 13 per cent. of total solids, of which 3½ per cent. must be chemically dry butter fat, shall be deemed below the standard required in creameries for butter manufacture. (Vict. 51, chap. 31.)

STANDARD FOR QUANTITY OF MILK.

Borden's standard of 8⅝ pounds per gallon is now taken and accepted as the standard of milk, not only in our own country, but in all Europe. (Fifth Annual Report [1889] Mich. Dairymen's Association.)

VINEGAR STANDARD.

CONNECTICUT.

Acidity, 4 per centum.

If cider vinegar, 2 per centum solids. Artificial coloring matter prohibited. (Laws 1897, chap. 67.)

DISTRICT OF COLUMBIA.

Acetic acid, 5 per centum.

Solids, 1.5 per centum.

INDIANA.

Acidity, 4 per centum.

Cider vinegar, 2 per centum of solids in addition. Artificial coloring matter prohibited. (Laws 1889, chap. 70.)

MASSACHUSETTS.

Acidity, 4 per centum.

If cider vinegar, 2 per cent. solids.

Artificial coloring matter deemed an adulteration. (Laws 1885, chap. 150.)

BOSTON.

Acetic acid, 5 per centum.

Solids, 1.5 per centum.

MICHIGAN.

Fruit or grain vinegar, 4 per centum acetic acid. Foreign substances not allowed.

Distilled vinegar, coloring matter not permitted.

Fermented vinegar, 1¾ per cent. solids at the temperature of boiling water, and two and a half tenths of 1 per centum ash or mineral matter.

Cider vinegar, 1¾ per centum solids. Foreign substances, drugs or acids, prohibited. (Laws 1897. Approved April 16, S. L. R.)

MINNESOTA.

Acidity, 4.5 per centum.

Solids, 1¾ per centum. (Laws 1889, chap. 7.)

Artificial coloring matter prohibited. (Laws 1891, chap. 119.)

NEBRASKA.

Fruit or grain vinegar, 4 per centum acetic acid.

Cider vinegar, solids, 2 per centum.

Artificial coloring matter prohibited. (Laws 1897, chap. 4.)

NEW YORK.

Acetic acid, 4.5 per centum.

Solids, 2 per centum.

Artificial coloring matter prohibited. (Laws 1893, chap. 338, art. III, § 50.)

OHIO.

Cider vinegar, acidity 4 per centum.

Solids, 2 per centum.

Artificial coloring matter prohibited. (Laws 1887; amended by Laws 1888.)

PENNSYLVANIA.

Cider vinegar, acidity 4 per centum.

Solids, 1½ per centum by weight at a temperature of boiling water. Foreign substances, drugs or acids, prohibited.

Fermented vinegar, not distilled, solids, 1½ per centum by weight at a temperature of boiling water.

All fruit or grain vinegars, acetic acid 4 per centum. Foreign substances are prohibited, but an amount of spices necessary for flavoring, if such spices do not color the vinegar, is permitted. (Laws 1897, No. 140.)

WISCONSIN.

Acidity, 4 per centum.

If cider vinegar, 2 per cent solids in addition.

Barrels containing vinegar are to be branded with the standard strength of contents, which shall be denoted by the strength of acetic acid. (Laws 1891, chap. 394.)

AGRICULTURAL LAW.

CHAPTER 338.

AN ACT in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws.

Approved by the Governor April 10, 1893. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

CHAPTER XXXIII OF THE GENERAL LAWS.

THE AGRICULTURAL LAW.

Article 1. General Provisions. (§§ 1-12.)
2. Dairy products. (§§ 20-37.)
3. Adulterated vinegar. (§§ 50-53.)
4. Diseases of domestic animals. (§§ 60-71.)
*5. Miscellaneous provisions. (§§ 80-90.)
†6. Forest preserve. (§§ 100-116.)
†7. Adirondack park. (§§ 120-127.)
‡8. (Paris green. [§§ 110-114.])

ARTICLE I.

GENERAL PROVISIONS.

Section 1. Short title.
2. Commissioner of agriculture.
3. Power of commissioner, his assistants and employes.
4. Expert butter and cheesemakers.
5. Annual report.
6. Certificate of chemist presumptive evidence.
7. Evidence; principal's liability for acts of agent.
8. Prosecution for penalty.
9. Disposal of fines and moneys recovered.
10. When injunction may be obtained.
11. When prosecution shall not be compelled to elect.
12. Inspection, how conducted.

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* Chapter 500, Laws of 1897, made new article 5, and articles 5 and 6 are made articles 6 and 7.

† Repealed and new article 6 enacted by chapter 395, Laws of 1895.

‡ New article 8 enacted by chapter 113, Laws of 1898.

§ 1. **Short title.** This chapter shall be known as the agricultural law.

§ 2. **Commissioner of agriculture.** There shall be a department of the state government known as the department of agriculture, which shall be charged with the execution of the laws relating to agriculture and agricultural products. The commissioner of agriculture shall be the chief of the department. The New York state dairy commissioner shall be the commissioner of agriculture until his successor shall be appointed and qualified. The commissioner of agriculture shall be appointed by the governor, by and with the advice and consent of the senate. His term of office shall be three years. He shall be paid an annual salary of four thousand dollars and his necessary expenses not to exceed five hundred dollars, incurred in the discharge of his official duties. He may appoint a director of farmers' institutes and such clerks and assistant commissioners and employ such clerks, chemists, agents and counsel as he may deem necessary for the proper enforcement of such laws and the proper administration of the department, who shall receive such compensation as may be fixed by him and their necessary expenses. The compensation of his clerks, assistants and other persons employed by him and such necessary expenses shall be paid on his certificate by the treasurer on the warrant of the comptroller. All other charges, accounts and expenses of the department authorized by law shall be paid by the treasurer on the warrant of the comptroller, after they have been audited and allowed by the comptroller. The trustees of public buildings shall furnish suitable rooms for the use of the department in the new capitol.

§ 3. **Powers of the commissioners,* his assistant and employes.** The commissioner of agriculture, his clerks, assistants, experts, chemists, agents and counsel employed by him, shall have full access to all places of business, factories, farms, buildings, carriages, cars and vessels used in the manufacture, sale or transportation within the state of any dairy products or any imitation thereof, or of any article or product with respect to which any authority is conferred by this chapter on such commissioner. They may examine and open any package, can or vessel containing or believed to contain any article or product, which may be manufactured, sold or exposed for sale in violation of the provisions of this chapter, and may inspect the contents therein, and take therefrom samples for analysis.

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*So in the original.

§ 4. **Expert butter and cheese makers.** The commissioner of agriculure may appoint and employ not more than five expert butter and cheese makers, who shall, under his direction, examine and inspect butter and cheese factories and attend at agricultural fairs, societies and meetings designated by the commissioner, to impart thereat information as to the best and most approved method of making butter and cheese and improving the quality thereof.

§ 5. **Annual report.** The commissioner of agriculture shall make an annual report to the legislature on or before January fifteenth, of his work and proceedings for the year ending September thirtieth, next preceding which shall include a statement in detail of the number of assistant commissioners, chemists, experts, agents, and counsel employed under the provisions of this chapter during such year, and their compensation, expenses and disbursements; and also a statement in detail of the expenditures of moneys appropriated for the state agricultural society, the county agricultural societies and the New York agricultural experiment station; and other agricultural purposes and estimates of the amounts required for all such purposes for the ensuing year. He may require the state agricultural society and the county agricultural societies to make reports to him and prescribe the form of such reports.

§ 6. **Certificate of chemist presumptive evidence.** Every certificate, duly signed and acknowledged, of a chemist, analyst or other expert employed by the commissioner of agriculture or any analysis, examination or investigation made by such analyst, chemist or expert with respect to any matter or product which the commissioner has authority to examine or cause to be examined, shall be presumptive evidence of the facts therein stated.

§ 7. **Evidence; principal's liability for act of agent.** The doing of anything prohibited by this chapter shall be evidence of the violation of the provisions of this chapter relating to the thing so prohibited and the omission to do anything directed to be done shall be evidence of a violation of the provisions of the chapter relative to the thing so directed to be done. The intent of any person doing or omitting to do any such act is immaterial in any prosecution for a violation of the provisions of this chapter. Any person who suffers, permits or allows any violation of the provisions of this chapter by his agent or servant, or in any room or building occupied or controlled by him, shall be deemed a principal in such violation and liable accordingly.

§ 8. **Prosecution for penalties.** Whenever the commissioner of agriculture shall know or have reason to believe that any penalty has been incurred by any person for a violation of any of the provisions of this chapter, or that any sum has been forfeited by reason of any such violation, he may cause an action or proceeding to be brought in the name of the people for the recovery of the same.

§ 9. **Disposal of fines and moneys recovered.** One half of all money recovered, either as penalties, forfeitures or otherwise, for the violation of any of the provisions of this chapter, and from fines imposed as a punishment for any criminal offense committed in violation of the provisions of this chapter, or of the penal code relating to the punishment of criminal offenses committed in violation of the provisions of law for the prevention of frauds in the manufacture or sale of any of the articles or products to which this chapter relates, shall be paid by the court or the clerk thereof to the city or county where the recovery shall be had or fine collected for the benefit of the poor of such city or county, except in the city and county of New York and the city of Brooklyn, where the same shall be paid to the proper authorities, and equally divided by them between the pension funds of the police and fire departments. The residue of such moneys shall be paid into the treasury of the state, and paid out by the treasurer, upon the warrant of the comptroller, for the purpose of defraying the expenses of the department of agriculture, audited by the comptroller. The same disposal shall be made of all moneys recovered upon any bond given by any officer by virtue of the provisions of this chapter.

§ 10. **When injunctions may be obtained.** In an action in the supreme court for the recovery of a penalty or forfeiture incurred for the violation of any of the provisions of this chapter an application may be made on the part of the people to the court or any justice thereof for an injunction to restrain the defendant, his agents and employes from the further violation of such provisions. The court or justice to whom such application may be made, shall grant such injunction on proof, by affidavit, that the defendant has been guilty of the violations alleged in the complaint, or of a violation of any such provision subsequent to the commencement of the action, and in the same manner as injunctions are usually granted under the rules and practice of the court. No security on the part of the plaintiff shall be required, and costs of the application may be granted or refused in the discretion of the court or justice. If the plaintiff shall recover judgment in the action for any penalty or forfeiture demanded in the complaint, the judgment shall contain a permanent injunction, restraining the defendant, his agents and employes, from any further violation of such provision of this chapter. Any injunction, order or judgment obtained under this section may be served on the defendant by posting the same upon the outer door of the defendant's usual place of business, or where such violation was or may be committed, or in the manner required by the code of civil procedure, and the rules and practice of the court. Personal service of the injunction shall not be necessary when such service cannot be secured with reasonable diligence, but the service herein provided shall be deemed sufficient in any proceeding for the violation of such injunction.

§ 11. **When prosecution shall not be compelled to elect.** In an action for a penalty or forfeiture incurred by reason of the violation of the provisions of this chapter, when the complaint charges a violation of any two or all of such provisions, the plaintiff shall not be compelled to elect between the counts under such different provisions, but shall be entitled to recover if it is found that a violation of any one of such provisions has been committed for which a penalty or forfeiture is imposed.

(*Amended by chapter* 557 *of the Laws of* 1898.)

§ 12. **Inspection, how conducted.** When the commissioner of agriculture, an assistant commissioner, or any person or officer authorized by the commissioner, or by this chapter, to examine or inspect any product manufactured or offered for sale shall in discharge of his duties take samples of such product, he shall take duplicate samples thereof in the presence of at least one witness, and he shall in the presence of such witness seal both of such samples, and shall tender, and, if accepted, deliver at the time of taking one sample to the manufacturer or vendor of such product, or to the person having custody of the same, with a statement in writing of the cause of the taking of the sample.

ARTICLE II.

DAIRY PRODUCTS.

Section 20. Definitions.
21. Care and feed of cows.
22. Prohibition of the sale of adulterated milk.
23. Regulations in regard to butter and cheese factories.
24. Cans to be branded with name of county.
25. Regulations in regard to condensed milk.
26. Manufacture and sale of imitation butter prohibited.
27. Manufacture or mixing of animal fats with milk, cream or butter prohibited.
28. Prohibited articles not to be furnished for use.
29. Use of coloring matter prohibited.
30. Manufacture and sale of imitation cheese prohibited.
31. When prohibitions do not apply to skim milk or skim cheese.
32. Packages to be branded with name of maker.
33. Manufacturer's brand of cheese.
34. Use of false brand prohibited.
35. County trade-marks.
36. Object and intent of this article.
37. Penalties.

§ 20. **Definitions.** The terms, butter and cheese, when used in this article, mean, the products of the dairy, usually known by those terms, which are manufactured exclusively from pure, unadulterated milk or cream or both, with or without salt or rennet, and with or without coloring matter or sage. The terms oleomargarine, butterine, imitation butter or imitation cheese, shall be construed to mean any article or substance in the semblance of butter or cheese not the usual product of the dairy, and not made exclusively of pure and unadulterated milk or cream, or any such article or substance into which any oil, lard or fat not produced from milk or cream enters as a component part, or into which melted butter or butter in any condition or state, or any oil thereof has been introduced to take the place of cream. The term, adulterated milk, when so used, means:

1. Milk containing more than eighty-eight per centum of water or fluids.

2. Milk containing less than twelve per centum of milk solids.

3. Milk containing less than three per centum of fats.

4. Milk drawn from cows within fifteen days before and five days after parturition.

5. Milk drawn from animals fed on distillery waste or any substance in a state of fermentation or putrefaction or on any unhealthy food.

6. Milk drawn from cows kept in a crowded or unhealthy condition.

7. Milk from which any part of the cream has been removed.

8. Milk which has been diluted with water or any other fluid, or to which has been added or into which has been introduced any foreign substance whatever.

All adulterated milk shall be deemed unclean, unhealthy, impure and unwholesome. The terms, pure milk or unadulterated milk, when used singly or together mean sweet milk not adulterated, and the terms pure cream or unadulterated cream, when used singly or together mean cream taken from pure and unadulterated milk.

§ 21. **Care and feed of cows.** No person shall keep cows, for the production of milk for market or for sale or exchange, or for manufacturing the milk or cream from the same into any article of food, in a crowded or unhealthy condition, or feed any such cows on distillery waste or on any substance in the state of putrefaction or fermentation, or upon any food that is unhealthy or that produces impure, unhealthy, diseased or unwholesome milk. But this section shall not be construed to prohibit the feeding of ensilage.

§ 22. **Prohibition of the sale of adulterated milk.** No person shall sell or exchange, or offer or expose for sale or exchange, any unclean, impure, unhealthy, adulterated or unwholesome milk or any cream from the same, or sell or exchange or offer or expose for sale or exchange any article of food made from such milk, or of or from cream from the same, or manufacture from any such milk or cream from the same, any article of food.

§ 23. **Regulations in regard to butter and cheese factories.** No person shall sell, supply or bring to be manufactured to any butter or cheese factory any milk diluted with water, or any unclean, impure, unhealthy, adulterated or unwholesome milk, or milk from which any of the cream has been taken, except pure skim milk to skim-cheese factories. No person shall sell, supply or bring to be manufactured to any butter or cheese factory any milk from which there has been kept back any part of the milk commonly known as strippings, or any milk that is sour, except pure skim milk to skim-cheese factories. The owner or proprietor or the persons having charge of any butter or cheese factory, not buying all the milk used by him, shall not use for his own benefit, or allow any of his employes or any other person to use for his own benefit, any milk, cream, butter or cheese or any other product thereof, brought to such factory, without the consent of the owners of such milk or the products thereof. Every butter or cheese manufacturer not buying all the milk he uses, shall keep a correct account of all the milk daily received, of the number of packages of butter and cheese made each day, and the number of packages and aggregate weight of cheese and butter disposed of each day; which account shall be open to inspection to any person who delivers milk to such factory.

§ 24. **Cans to be branded with the name of county.** No person shall sell or offer or expose for sale or exchange any milk, except in the county where produced, unless each can, vessel or package containing such milk shall be distinctly and durably branded with letters not less than one inch in length and of a suitable width to correspond with such length, and with suitable spaces between the letters, on the outside, above the center, on every can, vessel or package containing such milk, the name of the county from which the same is produced; and the same letters shall be branded or painted in a conspicuous place on the carriage or vehicle in which the milk is drawn to be sold; and such milk shall not be sold by the producer outside of the county in which it is produced, except in or out of a can, vessel, package or carriage or vehicle so marked. The foregoing prohibitions and provisions of this section shall not apply when milk is sold or delivered in glass bottles. No milk shall be sold or delivered in glass bottles, except in the county where produced, unless such bottles shall have legibly blown, stamped, engraved, etched, impressed or moulded in the glass, or otherwise produced upon such bottles, the name of the vendor, or the same is on a label or cover affixed thereto, or there is some mark or device on or affixed to such bottles by which the vèndor may be ascertained.

(*Amended by section* 1 *of chapter* 143 *of the Laws of* 1894.)

§ 25. **Regulations in regard to condensed milk.** No condensed milk shall be made or offered or exposed for sale or exchange unless manufactured from pure, clean, healthy, fresh, unadulterated and wholesome milk from which the cream has not been removed. No person shall manufacture, sell or offer for sale or exchange in hermetically sealed cans, any condensed milk, containing less than twenty-five per centum of butter fats and unless put up in packages upon which shall be distinctly labeled or stamped the name of the persons or corporation by whom made and the brand by which or under which it is made. When condensed milk shall be sold from cans or packages not hermetically sealed, the vendor shall brand or label such cans or packages with the name of the manufacturer of the milk contained therein.

(*Amended by section* 1 *of chapter* 426 *of the Laws of* 1894, *and section* 1 *of chapter* 768 *of the Laws of* 1897.)

§ 26. **Manufacture and sale of imitation butter prohibited.** No person by himself, his agents or employes, shall produce or manufacture out of or from any animal fats or animal or vegetable oils not produced from unadulterated milk or cream from the same, the article known as oleomargarine or any article or product in imitation or semblance of natural butter produced from pure, unadulterated milk or cream of the same; or mix, compound with or add to milk, cream or butter any acids or other deleterious substance or any animal fats or animal or vegetable oils not produced from milk or cream, so as to produce any article or substance or any human food in imitation or in the semblance of natural butter, nor sell, keep for sale or offer for sale any article, substance, or compound made, manufactured or produced in violation of the provisions of this section, whether such article, substance or compound shall be made or produced in this state or elsewhere.

§ 27. **Manufacture of (*) mixing of animal fats with milk, cream or butter prohibited.** No person shall manufacture, mix or compound with or add to natural milk, cream or butter any animal fats or animal or vegetable oils, nor make or manufacture any oleaginous substance not produced from milk or cream, with intent to sell the same as butter or cheese made from unadulterated milk or cream or have the same in his possession with such intent; nor shall any person solicit or take orders for the same or offer the same for sale, nor shall any such article or substance or compound so made or produced, be sold as and for butter or cheese the product of the dairy. No person shall coat, powder or color with annatto or any coloring matter whatever, butterine or oleomargarine or any compound of the same or any product or manufacture made in whole or in part from animal fats or animal or vegetable oils not produced from unadulterated milk or cream by means of which such product, manufacture or compound shall resemble butter or cheese, the product of the dairy; nor shall he have the same in his possession with intent to sell the same nor shall he sell or offer to sell the same.

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*So in the original.

§ 28. **Prohibited articles not to be furnished.** No keeper or proprietor of any bakery, hotel, boarding-house, restaurant, saloon, lunch-counter or place of public entertainment, or any person having charge thereof or employed thereat, or any person furnishing board for any others than members of his own family, or for any employes where such board is furnished for a compensation or as part of the compensation of any such employe, shall keep, use or serve therein either as food for his guests, boarders, patrons, customers or employes or for cooking purposes any article or substance made in violation of the provisions of this article.

§ 29. **Use of coloring matter prohibited.** No person manufacturing with intent to sell any substance or article in imitation or semblance of butter or cheese not made exclusively from unadulterated milk or cream or both, with salt or rennet or both and with or without coloring matter or sage, but into which any animal, intestinal or offal fats, or any oils or fats or oleaginous substance of any kind not produced from from* pure, unadulterated milk or cream, or into which melted butter, or butter in any condition or state or any modification of the same, or lard or tallow shall be introduced, shall add thereto or combine therewith any annatto or compounds of the same, or any other substance or substances whatever, for the purpose or with the effect of imparting thereto a color resembling yellow, or any shade of yellow butter or cheese, nor introduce any such coloring matter or other substance into any of the articles of which the same is composed.

§ 30. **Manufacture and sale of imitation cheese prohibited.** No person shall manufacture, deal in, sell, offer or expose for sale or exchange any article or substance, in the semblance of or in imitation of cheese made exclusively of unadulterated milk or cream, or both, into which any animal, intestinal or offal fats or oils, or melted butter or butter in any condition or state or modification of the same, or oleaginous substances of any kind not produced from unadulterated milk or cream, shall be introduced.

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*So in the original.

§ 31. **When prohibition does not apply to skim-milk or skim-cheese.** Except in the counties of New York and Kings, the prohibitions contained in this article against the sale of adulterated milk shall not apply to skim-milk, which is clean, pure, healthy, wholesome and unadulterated, except by skimming, sold for use in the county in which it is produced or an adjoining county, if it is sold for and as skimmed milk. The prohibitions in this article against the sale of cheese made from unadulterated milk or cream, shall not apply to pure skim-cheese made from milk which is clean, pure, healthy, wholesome and unadulterated, except by skimming.

(*Amended by chapter* 153 *of the Laws of* 1898.)

§ 32. **Packages to be branded with name of maker.** No manufacturer of receptacles for the package of butter shall sell or dispose of any such receptacle without branding his name and the true weight of the receptacle upon the same with legible letters or figures not less than one-quarter of an inch in length. No person shall sell, or offer for sale, any package containing butter or lard packed by him unless the true weight thereof, with the initial letters of the name of the person packing such butter or lard, be marked or stamped in a legible manner on the side or head of such package.

(*Amended by chapter* 559 *of the Laws of* 1898.)

§ 33. **Manufacturer's brand of cheese.** Every manufacturer of full-milk cheese may put a brand upon each cheese indicating "full-milk cheese," and the date of the month and year when made, and no person shall use such a brand upon any cheese made from milk from which any of the cream has been taken. The commissioner of agriculture shall procure and issue to the cheese manufacturers of the state on proper application therefor, and under such regulations as to the custody and use thereof as he may prescribe, a uniform stencil brand, bearing a suitable device or motto, and the words, "New York state full-cream cheese." Every such brand shall be used upon the outside of the cheese and upon the package containing the same, and shall bear a different number for each separate factory. The commissioner shall keep a book, in which shall be registered the name, location and number of each manufactory using the brand, and the name or names of the persons at each manufactory authorized to use the same. No such brand shall be used upon any other than full-cream cheese or packages containing the same.

§ 34. **Use of false brand prohibited.** No person shall offer, sell, or expose for sale, in any package, butter or cheese which is falsely branded or labeled.

§ 35. **County trade marks.** At a regular or special meeting of a county dairymen's association in any county of the state there may be adopted a county trade mark, by a majority of the members present and voting, to be used as a trade mark by am* person manufacturing pure unadulterated butter or full-cream cheese in such county. The secretary of the association shall forthwith send to the commissioner of agriculture a copy of such trade mark, which copy he shall place on file in his office, noting thereupon the day and hour he received the same. But one county trade mark for butter and for cheese shall be placed on file for the same county. No association shall adopt any trade mark of any county already on file, or use that of any other county in the formation of a trade mark.

§ 36. **Object and intent of this article.** This article and each section thereof are declared to be enacted to prevent deception in the sale of dairy products, and to preserve the public health, which is endangered by the manufacture, sale and use of the articles or substances herein regulated or prohibited.

(*Amended by chapter* 554 *of the Laws of* 1897, *and chapter* 558 *of the Laws of* 1898.)

§ 37. **Penalties.** Every person violating any of the provisions of this article shall forfeit to the people of the state of New York the sum of one hundred dollars for every such violation. When such violation consists of the manufacture or production of any prohibited article, each day during which or any part of which such manufacture or production is carried on or continued, shall be deemed a separate violation of the provisions of this article.

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*So in the original.

When the violation consists of the sale, or the offering or exposing for sale or exchange of any prohibited article or substance, the sale of each one of several packages shall constitute a separate violation, and each day on which any such article or substance is offered or exposed for sale or exchange shall constitute a separate violation of this article. When the use of any such article or substance is prohibited, each day during which or any part of which said article or substance is so used or furnished for use, shall constitute a separate violation, and the furnishing of the same for use to each person to whom the same may be furnished shall constitute a separate violation.

ARTICLE III.

ADULTERATED VINEGAR.

Section 50. Definition of adulterated vinegar.
51. Manufacture and sale of adulterated or imitation vinegar prohibited.
52. Packages containing cider vinegar to be branded.
53. Penalties.

§ 50. **Definition of adulterated vinegar.** All vinegar which contains any proportion of lead, copper, sulphuric acid, or other ingredients injurious to health, or any artificial coloring matter or which has not an acidity equivalent to the presence of at least four and one-half per centum, by weight, of absolute acetic acid, or cider vinegar which has less than such an amount of acidity, or less than two per centum of cider vinegar solids on full evaporation over boiling water, shall be deemed adulterated. The term, cider vinegar, when used in this article means vinegar made exclusively from pure apple juice.

§ 51. **Manufacture and sale of adulterated or imitation vinegar prohibited.** No person shall manufacture for sale, keep for sale or offer for sale:

1. Any adulterated vinegar.

2. Any vinegar or product in imitation or semblance of cider vinegar, which is not cider vinegar.

3. As or for cider vinegar, any vinegar or product which is not cider vinegar.

§ 52. **Packages containing cider vinegar to be branded.** Every manufacturer or producer of cider vinegar shall plainly brand on the head of each cask, barrel keg or other package containing such vinegar, his name and place of business and the words "cider vinegar." And no person shall mark or brand as or for cider vinegar any package containing that which is not cider vinegar.

§ 53. **Penalties.** Every person violating the provisions of this article shall forfeit and pay to the people of the state the sum of one hundred dollars for each violation.

ARTICLE IV.

DISEASES OF DOMESTIC ANIMALS.

Section 60. Suppression of infectious or contagious disease.
61. Commissioner to issue notice.
62. Farms to be quarantined.
63. Detention and destruction of animals.
64. Employment of veterinary surgeons.
65. Regulations and enforcement thereof.
66. Penalties.
67. Expenses.
68. Compensation to owners of animals destroyed.
69. Federal regulations.
70. Rights of federal inspectors.

§ 60. **Suppression of infectious and contagious disease.** Whenever any infectious or contagious disease except tuberculosis and glanders affecting domestic animals shall be brought into or break out in this state, the commissioner of agriculture shall take measures to promptly suppress the same, and to prevent such disease from spreading.

§ 61. **Commissioner to issue notice.** He shall issue and publish a notice, stating that a specified infectious or contagious disease exists in any designated county or other geographical district of the state, and warning all persons to seclude in the premises where they may be at the time, all animals within such county or district, that are of a kind susceptible to contract such disease, and ordering all persons to take such precautions against the spreading of the disease, as the nature thereof may in his judgment render necessary or expedient, and which he may specify in such notice. Such notice shall be published in such newspapers, and be posted in such manner as the commissioner may designate, and as, in his judgment, are most likely to give notice thereof.

§ 62. **Farms to be quarantined.** The commissioner or an assistant commissioner, shall order any premises, farm or farms where such disease exists, or recently existed, to be put in quarantine, so that no domestic animal be removed from or brought to the premises or places quarantined, and shall prescribe such regulations as he may judge necessary or expedient to prevent the communication of the disease by infection or contagion, in any way from the places so quarantined.

§ 63. **Detention and destruction of animals.** The commissioner or an assistant commissioner, may order all or any animals coming into the state to be detained at any place or places for the purpose of inspection and examination. He may prescribe regulations for the destruction of animals affected with infectious or contagious disease, and for the proper disposal of their hides and carcasses, and of all objects which might carry infection or contagion. Whenever, in his judgment necessary, for the more speedy and economical suppression or prevention of the spread of any such disease, he may cause to be slaughtered, and to be afterwards disposed of, in such manner as he may deem expedient, any animal or animals, which, by contact or association with diseased animals, or by other exposure to infection or contagion, may be considered or suspected to be liable to contract or communicate the disease sought to be suppressed or prevented.

§ 64. **Employment of veterinary surgeons.** The commissioner may employ such and so many medical and veterinary practitioners and such other persons as he may, from time to time, deem necessary to assist him in discharging the duties imposed upon him by this article, and may fix their compensation. All persons now employed by the governor for such purposes shall continue in the employ of the commissioner upon the same terms, until such employment shall be terminated or modified by the commissioner.

No animal shall be destroyed by the commissioner or by his order, on the ground that it is a diseased animal, unless first examined by a medical or veterinary practitioner in the employ of the commissioner under this section, nor until such practitioner renders a certificate to the effect that he has made such examination, that in his judgment such animal is affected with a specified infectious or contagious disease, or that its destruction is necessary in order to suppress or aid in suppressing such disease, or to prevent such disease, or to prevent the spread thereof specifying the reasons for such necessity.

§ 65. **Regulations and the enforcement thereof.** The commissioner may prescribe such regulations as in his judgment may be thought suited for the suppression or prevention of the spread of any such disease, and for the disinfection of all premises, buildings, railway cars, vessels and other objects from or by means of which infection or contagion may take place or be conveyed. He may alter or modify, from time to time, as he may deem expedient, the terms of all notices, orders and regulations issued or made by him, and may at any time cancel or withdraw the same. He may call upon the sheriff or deputy sheriff, to carry out and enforce the provisions of any notice, order or regulation which he may make, and all such sheriffs and deputy sheriffs shall obey and observe all orders and instructions which they may receive from him in the premises.

§ 66. **Penalties.** Any person violating, disobeying or disregarding the terms of any notice, order or regulation, issued or prescribed by the commissioner under this article, shall forfeit to the people of the state the sum of one hundred dollars for every such violation.

§ 67. **Expenses.** All expenses incurred by the commissioner in carrying out the provisions of this article and in performing the duties herein devolved upon him shall be audited by the comptroller as extraordinary expenses of the department of agriculture, and paid out of any moneys in the treasury appropriated for such purposes.

§ 68. **Compensation to owners of animals destroyed.** The actual value at the time they are killed of any animals slaughtered under the provisions of this article, shall be paid to the owners of such animals. For the purpose of ascertaining and determining such value, the commissioner, or any agent appointed by him under this article, shall appoint one appraiser, the owner of the animals killed shall appoint another, and the two thus appointed shall select a third, and the three shall appraise the amount to be paid to the owner of the animals. The board of claims shall have exclusive jurisdiction to hear, audit and determine all claims which shall arise under the provisions of this article for compensation for animals slaughtered, and to allow thereon such sums as should be paid by the state. No compensation shall be made to any person who has willfully concealed the existence of disease among his animals or upon his premises, or who in any way by act or by willful neglect, has contributed to spread the disease sought to be suppressed or prevented.

§ 69. **Federal regulations.** The commissioner of agriculture may accept, in behalf of the state, the rules and regulations prepared and adopted by the commissioner of agriculture or the secretary or department of agriculture of the United States, under any act of congress for the establishment of a bureau of animal industry or to prevent the exportation of diseased cattle or to provide means for the extirpation and suppression of pleuro-pneumonia and other contagious diseases among domestic animals and shall co-operate with the authorities of the United States in the enforcement of the provisions of any such act.

§ 70. **Rights of federal inspectors.** The inspectors of the bureau of animal industry of the United States shall have the right of inspection, quarantine and condemnation of animals affected with any contagious, infectious or communicable disease, or suspected to be so affected or that may have been exposed to any such disease, and for such purposes they may enter upon any ground or premises; they may call the sheriffs, constables and peace officers to assist them in discharge of their duties in carrying out the provisions of any such act; and all sheriffs, constables and peace officers shall assist such inspectors when so requested, and such inspectors shall have the same powers and protection as peace officers, while engaged in the discharge of their duties. This state shall not be liable for any damages or expenses caused or made by such inspectors.

(*Sections* 71, 72 *and* 73 *added by chapter* 491 *of the Laws of* 1898.)

ARTICLE V.

(*Made Article* 6 *by Chapter* 500 *Laws of* 1897.)

MISCELLANEOUS PROVISIONS.

Section 80. The prevention of diseases among bees.
81. Proceedings of the agent of the commissioners.
82. The prevention of disease in fruit trees.
83. Appointment and duties of the agent of the commissioner of agriculture.
84. Proceedings in case of owner's failure to destroy.
85. The New York agricultural experiment station.
86. The state weather bureau.
87. The agricultural experiment station at Cornell university.
88. Receipts and apportionment of state moneys appropriated for the promotion of agriculture.
89. When agricultural societies entitled to additional sums from the state.
90. Annual report of the commissioner of agriculture and state society.

§ 80. **The prevention of diseases among bees.** No person shall keep in his apiary any colony of bees affected with a contagious malady known as foul brood and every bee-keeper, when he becomes aware of the existence of such disease among his bees, shall destroy or cause to be destroyed forthwith all colonies thus affected. In any county any five or more actual bee-keepers of the county in which foul brood exists, may present to the commissioner of agriculture a petition setting forth that such disease exists, or that the petitioners have reason to believe that it exists in such county, and the reasons of such belief and requesting him to appoint a competent person to prevent the spread of such disease, and eradicate the same.

Upon the receipt of such petition the commissioner of agriculture shall within thirty days thereafter appoint some well-known and competent bee-keeper of the county as an agent of the commissioner who shall hold his office during the pleasure of the commissioner of agriculture, and who shall within ten days after his appointment, file in the office of the county clerk of the county an acceptance of the appointment and constitutional oath of office.

§ 81. **Proceedings of the agent of the commissioner.** Upon written verified complaint of any two bee-keepers of the county to such agent, setting forth the existence of the disease, or that they have good reason to believe that it exists within the county, and the grounds of such belief, designating the apiary or apiaries wherein they believe it to be, such agent shall, without unnecessary delay, examine the bees so designated. If satisfied that any colony or colonies of such bees are diseased with foul brood, he shall, without further disturbance to the bees, fix some designating mark upon each hive wherein the disease exists, and immediately notify the owners of the bees, or by leaving a written notice at his place of residence, if he be a resident of the county, and if not, by leaving the same with the person in charge of such bees, requiring him within five days from the date of the notice to effectually remove or destroy such hive with its entire contents by burying them, or by fire. The agent of the commissioner shall be allowed for his services, under this section, two dollars for each full day spent by him in the discharge of his official duties, which shall be a county charge.

(*Amended by chapter* 482 *of the Laws of* 1898.)

§ 82. **The prevention of disease in fruit trees.** No person shall knowingly or willfully keep any peach, almond, apricot or nectarine tree affected with a contagious disease known as yellows, or offer for sale or shipment, or sell or ship to others any of the fruit thereof. Nor shall any person knowingly or willfully keep any plum, cherry or other trees infected with the contagious disease or fungus, known as black knot. Every such tree and the fruit of a tree infected with yellows shall be a public nuisance, and no damages shall be awarded for entering upon premises and destroying such trees and fruit if infected with yellows or for cutting away the diseased part of any tree infected with black knot or altogether destroying such tree if necessary to suppress such disease, if done in accordance with the provisions of this article. Every person when he becomes aware of the existence of such disease in any tree or fruit owned by him, shall forthwith destroy or cause such tree or fruit to be destroyed or the infected part to be cut away.

(*Amended by chapter* 134 *of the Laws of* 1895, *and chapter* 482 *of the Laws of* 1898.)

§ 83. **Appointment and duties of the agent of the commissioner of agriculture.** When the commissioner of agriculture knows and has reason to believe that any such contagious disease exists, or that there is good reason to believe it exists, or danger is justly apprehended of its introduction in any town or city in the state, he shall forthwith appoint a competent freeholder of such town or city as his agent, who shall hold office during his pleasure and who shall within ten days after his appointment, file an acceptance of the appointment, with the constitutional oath of office, in the office of the town clerk of the town. Such agent shall on or without complaint, whenever it comes to his notice that either of the diseases known as yellows or black knot exists or is supposed to exist within the limits of the town or city, proceed without delay to examine the trees or fruit supposed to be infected, and if the disease is found to exist, a distinguishing mark shall be placed upon the diseased trees. If the disease is the black knot, such distinguishing mark shall be placed on some affected part of the trees, or if in the judgment of such agent any such trees should be entirely destroyed, then the trunk of such tree shall be thoroughly girdled, and thereupon the owner notified personally, or by a written notice signed by such agent and left at his usual place of residence, or if a nonresident by leaving the notice with the person in charge of the trees or fruit, or in whose possession they may be. Such notice shall contain a statement of all the facts found to exist, with an order to effectually remove and destroy by fire or otherwise the trees or parts of trees so marked and designated, within ten days, Sundays excepted, from the day of the service of the notice. In case of fruit so infected, the notice shall require the person in whose possession or control it is found, to immediately destroy the same or cause it to be done.

(*Repealed by chapter* 482 *of the Laws of* 1898.)

§ 84. **Proceedings in case of owner's failure to destroy.** If any person shall refuse or neglect to comply with the order of such agent to remove and destroy trees or parts of trees so marked by him, such agent shall cause such trees or parts of trees to be removed and destroyed forthwith, employing all necessary assistance for that purpose; and such agent or his employes may enter upon any and all premises within the town or city for the purpose of such removal and destruction. Such agent shall be entitled to compensation for his services under this and the preceding sections at a rate of two dollars for each full day spent by him in the discharge of his duties, and the necessary disbursements paid or incurred by him, which with the expense and removal and destruction of any such trees or fruit shall be a town charge.

(*Amended by section* 1 *of chapter* 675 *of the Laws of* 1894.)

§ 85. **The New York agricultural experiment station.** The institution known as the New York agricultural experiment station, established in the village of Geneva for the purpose of promoting agriculture in its various branches by scientific investigation and experiment shall continue under the control and management of a board of trustees. Such board of trustees shall be known as the board of control of the state experiment station and shall consist of nine members to be appointed by the governor whose term of office shall be three years. The governor shall be a member of the board by virtue of his office. Such board of control shall annually elect a president from their own number and appoint a secretary and treasurer to hold their offices during the pleasure of the board. Such board of control shall have general management of the station and shall appoint a director to have oversight and management of the experiments and investigations which shall be necessary to accomplish the objects of said institution, and may employ competent and suitable chemists and other persons necessary for carrying on the work of the station. Such board shall have the direction of the expenditure of all moneys appropriated to the institution and annually make a full report to the commissioner of agriculture of their proceedings, receipts and expenditures. No member shall receive any compensation for his services as such; but shall be paid his necessary traveling expenses and those expenses incurred by him by an actual attendance upon the meeting of such board. The board shall make such rules and regulations, subject to the approval of the commissioner of agriculture, as may from time to time become necessary to carry out the objects of the station.

§ 86. **The state weather bureau.** The state meteorological bureau and weather service, shall hereafter be known as the state weather bureau, and shall be under the control and management of the commissioner of agriculture. Such commissioner may appoint the director of such bureau but such director shall not receive any compensation for his services. The commissioner may continue the central office and station for meteorological observation and experiment upon the grounds of Cornell university, and shall if practicable establish and supervise one or more volunteer weather stations in each congressional district of the state, in co-operation with the chief of the United States weather bureau, for the purpose of increasing the usefulness of the weather service of the state and of the United States. The sum of four thousand five hundred dollars, or so much thereof as the commissioner deems necessary, shall be annually appropriated to be paid to the commissioner by the treasurer, upon the warrant of the comptroller, issued upon the vouchers of the commissioner, for necessary clerical services at such central office, for printing and distributing reports of the results and operations of such bureau, in such manner as shall be most serviceable to the people of the state, and for the purchase, preservation and repair of proper and necessary instruments for the work of such bureau and for the reasonably necessary traveling and incidental expenses of such commissioner and director in the performance of their duties, and for such other expenses as such commissioner shall deem necessary for the efficient administration of such bureau.

(*Amended by section* 1 *of chapter* 376 *and section* 1 *of chapter* 675 *of the Laws of* 1894.)

§ 87. **The agricultural experiment station at Cornell university.** Cornell university is designated as the college within this state, solely entitled to receive the benefits of the act of congress of the United States approved March second, eighteen hundred and eighty-seven, entitled "An act to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July second, eighteen hundred and sixty-two, and of the acts supplementary thereto." All benefits of such act which this state is authorized thereby to apply to any college, institution or agricultural experiment station within this state, are applied to the agricultural experiment station established under the direction of Cornell university, and this state consents that all appropriation, moneys or benefits to or for the use of this state, or of any institution within this state, payable under or in pursuance of such act of congress shall be paid to the treasurer of Cornell university, the officer designated to receive the same, to be expended as provided in such act of congress. Such experiment station shall annually, on or before the first day of February, make to the commissioner of agriculture, a full and detailed report of its operations, including a statement of its receipts and expenditures.

(*Amended by section* 1 *of chapter* 241 *of the Laws of* 1894, *section* 1 *of chapter* 820 *of the Laws of* 1895, *section* 1 *of chapter* 221 *of the Laws of* 1896, *section* 1 *of chapter* 589 *of the Laws of* 1897, *and chapter* 494 *of the Laws of* 1898.)

§ 88. **Receipts and apportionments of state moneys appropriated for the promotion of agriculture.** The moneys appropriated for the promotion of agriculture in this state shall be distributed among the various county agricultural societies, the state agricultural society and the American institute in the city of New York in such proportion that out of every eight thousand dollars so distributed, each county society, the state society and said institute shall receive the number of dollars set opposite to it in the following schedule:

Albany	$205 00
Allegany	101 99
Broome	67 00
Cattaraugus	86 00
Cayuga	151 00
Chautauqua	143 00
Chemung	49 37
Chenango	122 00
Clinton	84 00
Columbia	133 00
Cortland	75 00
Delaware	106 00
Dutchess	157 00
Erie	186 00
Essex	71 00
Franklin	50 00
Fulton and Hamilton	60 00
Genesee	92 00
Greene	91 00
Herkimer	112 00
Jefferson	183 00
Kings	143 00
Lewis	53 00
Livingston	127 60
Madison	120 00
Monroe	194 00
Montgomery	107 00
American institute	950 00
Niagara	93 00
Oneida	255 00
Onondaga	204 00
Ontario	130 00

Orange	$152 00
Orleans	75 00
Oswego	131 00
Otsego	148 00
Putnam	38 00
Queens	91 00
Rensselaer	180 00
Richmond	34 00
Rockland	36 00
St. Lawrence	170 00
Saratoga	121 00
Schenectady	51 00
Schoharie	97 00
Schuyler	42 17
Seneca	74 00
Steuben	125 76
Suffolk	97 00
Sullivan	47 00
Tioga	61 00
Tompkins	96 70
Ulster	137 00
Warren	40 00
Washington	123 00
Wayne	126 00
Westchester	146 00
Wyoming	97 41
Yates	61 00
State society	700 00

In case a fractional part of eight thousand dollars is distributed, each society and the American institute shall receive such portion thereof as the amount to be received by it according to the foregoing schedule bears to eight thousand dollars. If there is no county agricultural society in any county, or it is not in active operation as such, the money which the county society of such county would be entitled to receive under this article shall be apportioned among and paid to the several town agricultural societies in such county according to the amount of premiums paid, provided such town societies sustain a public fair with premium lists, which premium lists and reports of such town fairs shall be forwarded and made to the secretary of the state agricultural society.

(*Amended by section* 2 *of chapter* 241 *of the Laws of* 1894, *and repealed by chapter* 654 *of Laws of* 1894; *re-enacted, with changes, by chapter* 587 *of the Laws of* 1895.)

§ 89. **When agricultural societies entitled to additional sums from the state.** When any county agricultural society, or the American institute in the city of New York, shall raise by voluntary subscription any sum of money, its president and treasurer shall make and subscribe an affidavit in duplicate of the formation of such society, and of its having raised a certain sum, specifying the amount, one of which affidavits shall be filed with the commissioner of agriculture and the other with the comptroller, who shall draw his warrant on the treasurer for a sum equal to the amount of such voluntary subscription, not exceeding the amount to which it would be entitled according to the apportionment in the last preceding section. Whenever the New York state agricultural society, the New York and New England agricultural society, the Western New York agricultural society, or the Interstate fair society shall annually raise, by voluntary subscription, not less than eight thousand dollars, for distribution by such society at its annual meeting and fair, as premiums on such articles productions and stock of the farm, and such improvements in farming machinery as they deem best calculated to promote the agricultural and stock-raising interests of this state, having special reference to the net profits which accrue or are likely to accrue from the mode pursued of raising the crop or stock, or the fabrication of the articles offered, with the intention that the premiums shall be given for the encouragement of the most economical or profitable mode in production; and shall so distribute such amount in such premiums; and the president and treasurer of such society shall make and subscribe a statement in duplicate verified by their affidavit, of the fact that such sum has been so raised by voluntary subscription for such premiums, specifying the amount raised and that the same has been so distributed in premiums, and shall file one of such statements and affidavits in the office of the commissioner of agriculture and the other in the office of the comptroller; and such society shall offer in writing, signed by its president and treasurer, addressed to, and filed in the office of the comptroller, to act as the agent of the state in distributing such sum or sums of money, as the state may appropriate for distribution as premiums at its annual meeting and fair for the promotion of agriculture, and the improvement of the breed of stock in this state, and shall execute to the people of this state a bond, signed in its name by its president and treasurer, with such sureties as the comptroller shall approve, conditioned for the faithful performance of its duty, as such agent for such distribution, and shall file the same in the office of the comptroller, the state will appropriate, in each case the sum of eight thousand dollars to be distributed by such society, as premiums on such articles, productions, stock and improvements as may be exhibited at its annual meeting and fair on the conditions hereinbefore named, provided, however, that before any portion of the sum so to be appropriated by the state shall be so distributed as premiums, the person, persons, company or association claiming the same, or to whom the same may be awarded, shall first deliver in writing, to the president of such society an accurate and complete description of the process, in preparing the soil, including the quantity and quality of the manure applied, in raising the crop and in feeding the animal, including the kind and quantity of food, as near as may be, and also of the expense and product of the crop, or of increase in the value of the animal, with the view of showing accurately the profit of cultivating the crop or of feeding or of fattening the animal.

§ 90. **Annual report to the commissioner of agriculture and state society.** The president and treasurer of any agricultural society which receives any money of the state or acts as the agent of the state in the distribution of money of the state as premiums, shall annually before the fifteenth of December, transmit to the commissioner of agriculture a detailed account of the expenditure or distribution of all such moneys as shall have come into their hands during the preceding year, and of such other moneys as they may have received from voluntary contributions for distribution as premiums, stating to whom, and for what purpose paid, with the vouchers therefor. The presidents of the several county societies and of the American institute shall annually transmit in the month of December, to the executive committee of the New York state agricultural society, all such reports or returns as they are required to demand from applicants, for premiums, together with an abstract of their proceedings during the year which shall be examined by such executive committee, and that they shall condense, arrange and report the same, with a statement of their own proceedings to the legislature on or before the first day of March in each year.

(*Amended by chapter* 640 *of the Laws of* 1894, *and chapter* 194 *of the Laws of* 1898.)

§ 91. This chapter shall take effect immediately.

CHAPTER 570.

AN ACT to amend the code of criminal procedure, relating to violations of the agricultural law.

Approved by the Governor May 4, 1893. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section fifty-six of the code of criminal procedure is hereby amended to read as follows:

§ 56. **Jurisdiction of courts.** Subject to the power of removal provided for in this chapter, courts of special sessions, except in the city and county of New York and the city of Albany, have in the first instance exclusive jurisdiction to hear and determine charges of misdemeanors committed within their respective counties, as follows:

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35. All violations of the provisions of the agricultural law.

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SECTION 408a OF THE PENAL CODE.

(*Amended by chapter* 426 *of the Laws of* 1894, *and chapter* 554 *of the Laws of* 1897.)

Section 408a of the Penal Code provides as follows:

408a. Violation of the agricultural law. Any person who disregards, disobeys or violates any proclamation, notice, order or regulation lawfully issued or prescribed by the commissioner of agriculture for the suppression or prevention of the spread of infectious or contagious diseases among domestic animals, or who violates any of the provisions of sections eighty and eighty-two of article five of the agricultural law is guilty of a misdemeanor; every person who violates any of the provisions of article two of said chapter is guilty of a misdemeanor and shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars, or by imprisonment of not less than one month or more than six months or by both such fine and imprisonment, for the first offense.

EXTRACT FROM CHAPTER 332 OF THE LAWS OF 1893.

SCHEDULE OF LAWS REPEALED.

REVISED STATUTES.	Sections.
Part 1, chapter 17, title 3	1-4.

LAWS OF	Chapter.	Section.
1841	169	All, except §§ 3 and 6.
1844	336	All.
1848	299	All, except §§ 3 and 6.
1869	167	All.
1878	134	All.
1879	306	All.
1880	592	All.
1881	300	All.
1882	215	All.
1882	238	All.
1882	246	All.
1883	13	All.
1884	202	All.
1884	418	All.
1884	474	All.
1885	183	All, except § 26.
1885	283	All.
1885	127	All.
1885	458	All.
1886	280	All.
1886	577	All, except that part of § 6 designated as § 24.
1887	155	All.
1887	223	All.
1887	403	All.
1887	430	All.
1887	475	All.
1887	562	All.
1887	583	All.
1888	286	All.
1888	298	All.
1888	520	All.
1888	550	All.
1889	24	All.
1889	148	All.
1889	515	All.
1889	538	All.
1890	8	All.
1891	140	All.
1891	354	1, 2.
1892	501	All.
1892	707	All.

LAWS OF 1894.

CHAPTER 143.

AN ACT to amend the agricultural law relating to condensed milk.

Became a law March 19, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section twenty-five of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," as amended by chapter five hundred and sixty-four of the laws of eighteen hundred and ninety-three, is hereby amended so as to read as follows:

§ 25. **Regulations in regard to condensed milk.** No condensed milk shall be made or offered or exposed for sale or exchange unless manufactured from pure, clean, healthy, fresh, unadulterated and wholesome milk from which the cream has not been removed either wholly or in part, or unless the proportion of milk solids shall be in quantity the equivalent of twelve per centum of milk solids in crude milk, and of which solids twenty-five per centum shall be fats. No person shall manufacture, sell or offer for sale or exchange in hermetically sealed cans, any condensed milk unless put up in packages upon which shall be distinctly labeled or stamped the name of the person or corporation by whom made and the brand by which or under which it is made. When condensed milk shall be sold from cans or packages not hermetically sealed, the vendor shall brand or label such cans or packages with the name of the manufacturer of the milk contained therein.

§ 2. This act shall take effect immediately.

CHAPTER 153.

AN ACT to establish a state veterinary college at Cornell university.

Became a law March 21, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. There is hereby established a state veterinary college at Cornell university. For the purpose of constructing and equipping suitable buildings for such college upon the grounds of said university at Ithaca, New York, the sum of fifty thousand dollars, or as much thereof as may be necessary, is hereby appropriated, to be paid by the treasurer, upon the warrant of the comptroller upon vouchers approved by the commissioner of agriculture to the Cornell university. No part of such moneys shall be expended until plans and specifications for the construction and equipment of such building, and of the location thereof, shall have been approved by the commissioner of agriculture, nor until the comptroller shall have certified that in his judgment the expense of the completion and equipment of such buildings in accordance with such plans and specifications will not exceed the amount of such appropriation. Such buildings and equipment shall be the property of the state.

§ 2. This act shall take effect immediately.

CHAPTER 241.

AN ACT to amend the agricultural law in relation to the distribution of money for agricultural purposes, and repealing certain acts and parts of acts.

Became a law April 3, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-eight, article five of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of the general laws," is hereby amended to read as follows:

(*Amended by section* 1 *of chapter* 820 *of the Laws of* 1895, *section* 1 *of chapter* 221 *of the Laws of* 1896, *section* 1 *of chapter* 589 *of the Laws of* 1897, *and chapter* 494 *of the Laws of* 1898.)

§ 88. **Receipts and apportionment of moneys for the promotion of agriculture.** Money appropriated for the promotion of agriculture in this state, the distribution of which is not otherwise provided by law, and money collected from racing associations pursuant to chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven, shall be apportioned and distributed by the commissioner of agriculture among the various county agricultural societies and the American institute in the city of New York, as follows: One-half thereof shall be apportioned and distributed equally, and the remainder in proportion to the actual premiums paid during the previous year by such societies and institute, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county, or it is not in active operation as such, the money which the county society of such county would be entitled to receive under this article shall be apportioned among and paid to the several town agricultural societies in such county according to the amount of premiums paid, provided such town societies sustain a public fair with premium lists, which premium lists and reports of such town fairs shall be forwarded and made to the commissioner of agriculture.

2. Section eighty-nine of said act is hereby amended to read as follows:

(*Repealed by chapter* 654 *of the Laws of* 1894; *re-enacted, with changes, by chapter* 587 *of the Laws of* 1895.)

§ 89. If any agricultural society, club or exposition other than the state agricultural society, which has held annual fairs during the past three years, shall, in any year, pay out at its annual meeting or fair three thousand dollars, as premiums for the promotion of agricultural interests, exclusive of premiums paid for trials of speed or endurance of man or beast, and the president and treasurer of such society, club or exposition shall make and subscribe a statement in duplicate, verified by their affidavit, of the fact that such sum has been so paid and distributed in premiums, and shall on or before the first day of December in such year, file one of such statements and affidavits in the office of the commissioner of agriculture, and the other in the office of the comptroller, and such society, club or exposition shall make an offer in writing, signed by its president and treasurer, addressed to and filed in the office of the comptroller, to act as the agent of the state in distributing such sum or sums of money as the state may appropriate for distribution as premiums at its annual meeting, and fair, for the promotion of agriculture, and the improvement of the breed of stock in this state, and the encouragement of the domestic and mechanic arts, and shall execute to the people of this state a bond, signed in its name by its president and treasurer, with such sureties, as the comptroller shall approve, conditioned for the faithful performance of its duty as such agent, for such distribution, and shall file the same in the office of the comptroller, the state will appropriate to each of such societies, clubs or expositions, the sum of two thousand dollars, to be distributed by such society, club or exposition as premiums on such articles, productions, stock and improvements as may be exhibited at its annual meeting and fair on the conditions hereinbefore named. Provided, however, that if any such society, club or exposition shall receive in any year two thousand dollars as herein provided, such society, club or exposition shall not receive any portion of the moneys collected from racing associations, pursuant to chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven, or of moneys already appropriated for the benefit of the county agricultural societies.

§ 3. Section six of chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven, and chapter five hundred and eleven of the laws of eighteen hundred and ninety-two, are hereby repealed.

§ 4. This act shall take effect immediately.

CHAPTER 376.

AN ACT to amend the agricultural law in relation to experiment stations.

Became a law April 27, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-seven of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," is hereby amended so as to read as follows:

§ 87. The Cornell university and the agricultural experiment station at Geneva, established by the laws of this state, are hereby designated as the institutions within this state to receive the benefits of the act of congress of the United States, approved March second, eighteen hundred and eighty-seven, entitled "An act to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July second, eighteen hundred and sixty-two, and the acts supplementary thereto." All benefits of said act which this state is authorized to apply to any college, institution or agricultural experiment station, within this state, are hereby applied to the agricultural experiment station established under the direction of the Cornell university and the agricultural experiment station at Geneva, and this state hereby consents that all appropriations, moneys or benefits to or for the benefit of this state, or any institution within this state payable under or in pursuance of this act of congress shall be paid nine-tenths thereof to the officer of the Cornell university, designated to receive the same in accordance with said act, and one-tenth thereof to the officer of the agricultural experiment station at Geneva, designated to receive the same in accordance with said act of congress. Such experiment stations shall, annually, on or before the first day of February make, to the commissioner of agriculture, a full and detailed report of its operations, including a statement of its receipts and expenditures for the year ending with the thirteenth day of September then next preceding.

§ 2. This act shall take effect immediately.

CHAPTER 410.

AN ACT making an appropriation for the disbursement of moneys paid into the treasury in pursuance of the provisions of chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven, and the acts amendatory thereof.

Became a law May 3, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The sum of twenty-two thousand seven hundred fifty-two dollars and sixty-four cents, being the amount paid into the treasury prior to the twelfth day of April, eighteen hundred and ninety-four, in pursuance of the provisions of chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven and acts amendatory thereof, is hereby appropriated out of any moneys in the treasury not otherwise appropriated payable by the treasurer, on the warrant of the comptroller, to the order of the commissioner of agriculture to be disbursed by him pursuant to the provisions of chapter two hundred and forty-one of the laws of eighteen hundred and ninety-four.

§ 2. This act shall take effect immediately.

CHAPTER 426.

AN ACT to amend the agricultural law and the penal code relative to violations of the same.

Became a law May 3, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section twenty-six of the agricultural law is amended as follows:

(*Amended by section* 1 *of chapter* 768 *of the Laws of* 1897.)

§ 26. **Manufacture and sale of imitation butter prohibited.** No person, by himself, his agents or employes, shall produce or manufacture out of or from any animal fats or animal or vegetable oils not produced from unadulterated milk, or cream from the same, any article or product in imitation or semblance of natural butter produced from pure, unadulterated milk or cream of the same; nor shall any person solicit or take orders for the same, or offer the same for sale, or mix, compound with or add to milk, cream or butter any acids or other deleterious substance, or any animal fats or animal or vegetable oils not produced from milk or cream, so as to produce any article or substance or any human food in imitation or in semblance of natural butter, nor sell, keep for sale or offer for sale any article, substance or compound made, manufactured or produced in violation of the provisions of this section, whether such article, substance or compound shall be made or produced in this state or elsewhere.

§ 2. Section four hundred and eight-a of the penal code is amended as follows:

(*Amended by chapter* 554 *of the Laws of* 1897.)

§ 408a. **Violations of agricultural law.** Any person who disregards, disobeys or violates any proclamation, notice, order or regulation, lawfully issued or prescribed by the commissioner of agriculture for the suppression or prevention of the spread of infectious or contagious diseases among domestic animals, or who violates any of the provisions of sections eighty and eighty-two of article five of the agricultural law, is guilty of a misdemeanor; every person who violates any of the provisions of article two of said chapter is guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars, or by imprisonment of not less than one month nor more than six months, or by both such fine and imprisonment, for the first offense, and by six months imprisonment for the second offense; and any person who violates any of the provisions of article three of said chapter is guilty of a misdemeanor, and shall be punished by a fine of not less than fifty dollars nor more than one hundred dollars.

§ 3. This act shall take effect immediately.

CHAPTER 640.

AN ACT to amend the agricultural law authorizing agricultural societies and corporations to lease their grounds.

Became a law May 10, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section ninety-one, article five of the agricultural law is hereby amended to read as follows:

(*Amended by Chapter* 194 *of the Laws of* 1898.)

§ 91. **Lease of grounds of agricultural societies and corporations.** Any agricultural society or corporation, owning or possessing grounds in a county of this State having a population of more than three hundred thousand and less than six hundred thousand may lease such grounds for any lawful purpose except running races not inconsistent with the use thereof for the purposes of the society or corporation, for such time or times as said grounds may not be needed by any such agricultural society or corporation for its own purposes.

§ 2. This act shall take effect immediately.

CHAPTER 654.

AN ACT making appropriations for the support of government.

Became a law May 11, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The several amounts named in this act are hereby appropriated and authorized to be paid from the several funds indicated, to the respective public officers, and for the several purposes specified, for the fiscal year beginning on the first day of October, in the year eighteen hundred and ninety-four, namely:

FROM THE GENERAL FUND.

* * * * * * * * *

For the promotion of agriculture in this state, sixty-four thousand dollars; twenty thousand dollars thereof shall be distributed in premiums by the New York state agricultural society; twenty thousand dollars thereof shall be distributed by the commissioner of agriculture among the county agricultural societies of this state and to the American institute of the city of New York, as follows: One-half thereof shall be apportioned and distributed equally, and the remainder in proportion to actual premiums paid during the previous year by such societies and institute, exclusive of premiums paid for racing, twenty-four thousand dollars, which shall be paid as follows: The sum of two thousand dollars to any society, club or exposition which shall have held annually fairs during each of the three years next preceding such distribution, and which shall have paid at each of its annual meetings or fairs during such three years three thousand dollars as premiums for agricultural interests, exclusive of the premiums paid for racing, and shall on or before the first day of December in such year file a statement in duplicate, verified by its president and treasurer, showing such payment, together with the amount of each premium and the name of the person to whom it was paid, one of which statements shall be filed in the office of the commissioner of agriculture, and the other in the office of the comptroller, and shall file a written offer and bond to be approved by the comptroller, to the effect that such society, club or exposition will act as an agent of the state for the distribution and payment of such money for premiums at its annual fair; but if such society, club or exposition shall receive two thousand dollars as herein provided, it shall not receive any portion of the moneys collected from racing associations or money already appropriated for the benefit of county agricultural societies; the balance of said twenty-four thousand dollars not distributed as herein provided to be distributed among the county agricultural societies of the state as follows: One-half of said balance to be apportioned and distributed equally and the remainder in proportion to the actual premiums paid during the previous year by such societies, exclusive of premiums paid for racing.

Chapter three hundred and fifty-four of the laws of eighteen hundred and ninety-one and section eighty-nine of article five of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three are hereby repealed.

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CHAPTER 675.

AN ACT to amend the agricultural law, in relation to agricultural experiment stations within this state, and to make an appropriation therefor.

Became a law May 12, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Sections eighty-five and eighty-seven of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," are hereby amended to read as follows:

§ 85. **The New York Agricultural Experiment Station.** The institution known as the New York Agricultural Experiment Station, established in the village of Geneva, for the purpose of promoting agriculture in its various branches by scientific investigation and experiment shall continue under the control and management of a board of trustees. Such board of trustees shall be known as the board of control of the state experiment station and shall consist of nine members to be appointed by the governor whose term of office shall be three years. The governor shall be a member of the board by virtue of his office. Such board of control shall annually elect a president from their own number and appoint a secretary and treasurer to hold their offices during the pleasure of the board. Such board of control shall have general management of the station and shall appoint a director to have oversight and management of the experiments and investigations which shall be necessary to accomplish the objects of said institution, and may employ competent and suitable chemists and other persons necessary for carrying on the work of the station. Such board shall have the direction of the expenditure of all moneys appropriated to the institution and annually, on or before the first day of December, make a full report to the commissioner of agriculture of their proceedings, receipts and expenditures, for the year ending with the thirtieth day of September then next preceding. No member shall receive any compensation for his services as such; but shall be paid his necessary traveling expenses and those expenses incurred by him by an actual attendance upon the meeting of such board. The board shall make such rules and regulations, subject to the approval of the commissioner of agriculture, as may from time to time become necessary to carry out the objects of the station. Such experiment station may, with the consent and approval of the commissioner of agriculture, appoint agricultural experts to assist such experiment station, in the second judicial department, in conducting scientific investigations and experiments in agriculture; in disseminating agricultural knowledge by means of lectures or otherwise; and in preparing and printing for free distribution the results of such investigations and experiments, and such other information as may be deemed desirable and profitable in promoting the agricultural interests of the state. Such experts may be removed by such experiment station, in its discretion, and may be paid for their services such sum as it may deem reasonable and proper and as shall be approved by the commissioner of agriculture. All of such work by such experiment station and by such experts shall be under the general supervision and direction of the commissioner of agriculture.

§ 87. The Cornell university and the agricultural experiment station at Geneva established by the laws of the state are hereby designated as the institutions within this state, entitled to receive such portion as the legislature shall determine of the benefits of the act of the congress of the United States, approved March second, eighteen hundred and eighty-seven, entitled "An act to establish agricultural experiment stations in connection with the colleges established in the several states, under the provisions of an act approved July second, eighteen hundred and sixty-two, and of the acts supplementary thereto." Such benefits of such acts which this state is authorized thereby to apply to any college, institution or agricultural experiment station within this state, are applied to the agricultural experiment station established under the direction of Cornell university and the agricultural experiment station at Geneva, and this state consents that such appropriation, money or benefits to or for the use of this state, or of any institution within this state, payable under or in pursuance of such act of congress, shall be paid nine-tenths thereof to the treasurer of Cornell university, the officer designated to receive the same, and one-tenth thereof to the officers of the agricultural experiment station at Geneva designated to receive the same, to be expended as provided in such act of congress. Such experiment station shall, annually, on or before the first day of December, make, to the commissioner of agriculture, a full and detailed report of its operations, including a statement of its receipts and expenditures for the year ending with the thirtieth day of September then next preceding. Such experiment station may, with the consent and approval of the commissioner of agriculture, appoint horticultural experts to assist such experiment station, in the fifth judicial department, in conducting investigations and experiments in horticulture; in discovering and remedying the disease of plants, vines and fruit trees; in ascertaining the best means of fertilizing vineyard, fruit and garden plantations, and of making orchards, vineyards and gardens prolific; in disseminating horticultural knowledge by means of lectures or otherwise; and in preparing and printing for free distribution, the results of such investigations and experiments, and such other information as may be deemed desirable and profitable in promoting the horticultural interests of the state. Such experts may be removed by such experiment station, in its discretion, and may be paid for their services such sum as it may deem reasonable and proper, and as shall be approved by the commissioner of agriculture. All of such work by such experiment station and by such experts shall be under the general supervision and direction of the commissioner of agriculture.

§ 2. The treasurer of this state shall keep the account of all moneys hereafter received by him in pursuance of such act of congress, in a separate fund, to the credit of the Cornell university and the agricultural experiment station at Geneva, in the proportion stated in section one of this act, and shall pay all such moneys immediately upon the receipt thereof by him to the officers respectively designated therein to receive the same, upon the warrant of the comptroller, issued upon the order of the trustees of Cornell university and the board of control of the agricultural experiment station at Geneva, in pursuance of said act of congress, which said moneys are hereby appropriated for the purposes herein stated.

§ 3. The sum of eight thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any money in the treasury not otherwise appropriated, to be paid to the New York State Agricultural Experiment Station, at Geneva, for the purpose of agricultural experiments, investigations, instruction and information, in the second judicial department, pursuant to section eighty-five of the agricultural law, and the sum of eight thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury, not otherwise appropriated, to be paid to the agricultural experiment station at Cornell university, for the purpose of horticultural experiments, investigations, instruction and information, in the fifth judicial department, pursuant to section eighty-seven of the agricultural law. Such money shall be paid by the treasurer upon the warrant of the comptroller, upon vouchers approved by the commissioner of agriculture.

§ 4. This act shall take effect immediately.

LAWS REPEALED.

LAWS OF	Chapter.	Section.
1887	479	6.
1891	354	All.
1892	511	All.
1893	338	89.

LAWS OF 1895.

CHAPTER 70.

AN ACT to authorize the commissioner of agriculture to settle and compromise certain claims in favor of the state for violations of sections twenty-six, twenty-seven, twenty-eight and twenty-nine of the agricultural law, relating to the sale or use of oleomargarine, so called.

Became a law March 4, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The commissioner of agriculture, subject to the approval in writing of the governor and attorney-general, is hereby authorized and empowered to settle, compromise and discharge all actions and causes of actions, or claims arising under the agricultural law since its passage to the passage of this act for any violation of sections twenty-six, twenty-seven, twenty-eight and twenty-nine of the agricultural law relating to the sale or use of oleomargarine, so called.

§ 2. All moneys received pursuant to any such settlement shall be paid by said commissioner into the treasury of the state; and any settlement made pursuant to this act shall be reported by the said commissioner in his next annual report.

§ 3. This act shall take effect immediately.

CHAPTER 134.

AN ACT to amend the agricultural law, in relation to agents appointed by the commissioner of agriculture to investigate the diseases of yellows or black knot.

Became a law March 20, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-three of the agricultural law is amended to read as follows:

(*Amended by chapter* 482 *of the Laws of* 1898.)

§ 83. **Appointment and duties of the agents of the commissioner of agriculture.** When the commissioner of agriculture has good reason to believe that any such contagious disease exists, or that there is danger of its introduction, in any town or city in the state, he shall, on the request of the town board of such town or the common council of such city, forthwith appoint a competent freeholder of such town or city as his agent, such freeholder to be recommended by the aforesaid town board or common council who shall within ten days after his appointment, file in the office of the clerk of such town or city his acceptance of the appointment and the constitutional oath of office. Such agent shall not hold office or be entitled to receive compensation for more than thirty days in the same calendar year, unless the supervisor of such town or the mayor of such city shall request an extension of term. If so requested the commissioner of agriculture may extend the term of such agent for the number of additional days, not exceeding thirty, specified in such request, and such agent shall be entitled to compensation accordingly. Such agent shall on or without complaint, whenever it comes to his notice that either of the diseases known as yellows or black knot exists or is supposed to exist within the limits of the town or city, proceed without delay to examine the trees or fruit supposed to be infected, and if the disease is found to exist, a distinguishing mark shall be placed upon the diseased trees. If the disease is the black knot, such distinguishing mark shall be placed on some affected part of the trees, or if in the judgment of such agent any such trees should be entirely destroyed then the trunk of such tree shall be thoroughly girdled, and thereupon the owner notified personally, or by a written notice signed by such agent and left at his usual place of residence, or if a non-resident, by leaving the notice with the person in charge of the trees or fruit, or in whose possession they may be. Such notice shall contain a statement of all the facts found to exist, with an order to effectually remove and destroy by fire or otherwise the trees or parts of trees so marked and designated, within ten days, Sundays excepted, from the day of the service of the notice. In case of fruit so infected, the notice shall require the person in whose possession or control it is found, to immediately destroy the same or cause it to be done.

§ 2. Every such agent of the commissioner of agriculture in office when this act takes effect shall, if his duties require, continue in office for ten days thereafter when his term shall expire. The commissioner of agriculture shall forthwith notify every such agent, in office when this act takes effect, that his term expires on the tenth day thereafter, but the failure to receive such notice shall not entitle any such agent to receive compensation after the expiration of his term.

§ 3. This act shall take effect immediately.

CHAPTER 230.

AN ACT making an appropriation for horticultural investigations and experiments in the fifth judicial department.

Became a law April 4, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The sum of sixteen thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury, not otherwise appropriated, to be paid to the agricultural experiment station at Cornell university, for the purpose of horticultural experiments, investigations, instruction and information, in the fifth judicial department, pursuant to section eighty-seven of the agricultural law. Such moneys shall be paid by the treasurer upon the warrant of the comptroller, on vouchers approved by the commissioner of agriculture.

§ 2. This act shall take effect immediately.

CHAPTER 395.

AN ACT to amend the game law and to repeal chapter three hundred and thirty-two of the laws of eighteen hundred and ninety-three, entitled "An act in relation to the forest preserve and Adirondack park, constituting articles six and seven of chapter forty-three of the general laws."

Became a law April 25, 1895, with the approval of the Governor. Passed, three-fifths being present.

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§ 6. The schedule of articles at the beginning of the agricultural law, chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, is hereby amended to read as follows:

CHAPTER XXXIII OF THE GENERAL LAWS.

THE AGRICULTURAL LAW.

Article 1. General provisions. (§§ 1-12.)
2. Dairy products. (§§ 20-37.)
3. Adulterated vinegar. (§§ 50-53.)
4. Diseases of domestic animals. (§§ 60-71.)
5. Miscellaneous provisions. (§§ 80-90.)
6. Laws repealed. (§§ 100-101.)

§ 7. The agricultural law is further amended by adding at the end thereof the following new article:

ARTICLE VI.

(*Made article* 7 *by chapter* 500 *of the Laws of* 1898.)

LAWS REPEALED.

Section 100. Laws repealed.
101. When to take effect.
Schedule of laws repealed.

§ 100. **Laws repealed.** Of the laws enumerated in the schedule hereto annexed, that portion specified in the last column is repealed.

§ 101. **When to take effect.** This chapter shall take effect immediately.

SCHEDULE OF LAWS REPEALED.

REVISED STATUTES.	Sections.
Part 1, chapter 17, title 3	1-4.

LAWS OF	Chapter.	Sections.
1841	169	All, except §§ 3 and 6.
1844	336	All.
1848	299	All, except §§ 3 and 6.
1869	167	All.
1878	134	All.
1879	306	All.
1880	592	All.
1881	300	All.
1882	215	All.
1882	238	All.
1882	246	All.
1883	13	All.
1884	202	All.
1884	418	All.
1884	474	All.
1885	183	All, except § 26.
1885	283	All.
1885	127	All.
1885	458	All.
1886	280	All.
1886	577	All, except that part of § 6 designated as § 24.
1887	155	All.
1887	223	All.
1887	403	All.
1887	430	All.
1887	475	All.
1887	562	All.
1887	583	All.
1888	286	All.
1888	298	All.
1888	520	All.
1888	550	All.
1889	24	All.
1889	148	All.
1889	515	All.
1889	538	All.
1890	8	All.
1891	140	All.
1891	354	1, 2.
1892	501	All.
1892	707	All.

CHAPTER 587.

AN ACT to amend the agricultural law, relating to the distribution of money appropriated for certain agricultural societies.

Became a law May 9, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The agricultural law, chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, is hereby amended by inserting therein a new section, eighty-nine, to read as follows:

§ 89. Distribution of money appropriated for certain agricultural societies. Whenever in any year there shall be appropriated the sum of twenty thousand dollars or more for the benefit of the several agricultural societies, clubs or expositions of the State, two thousand dollars of such amount shall be paid to every such society, club or exposition, which shall have held annual fairs or meetings during each of the three years next preceding such appropriation and which shall have paid at each of such annual fairs or meetings, during such three years, the sum of three thousand dollars as premiums for agricultural interests, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast. Such society, club or exposition shall annually before the first day of December in each year file in the office of the commissioner of agriculture a statement, verified by its president and treasurer, showing the payment of such premiums, with the amount and object thereof, together with the name of the persons to whom they were paid. A similarly verified duplicate of such statement shall be filed in the office of the comptroller. There shall at the same time be filed in the office of the comptroller a written offer to the effect that such society, club or exposition will act as the agent of the State for the distribution and payment of the money so appropriated as premiums at its annual fair or meeting for the promotion of agricultural interests, together with a bond executed to the people of the State, signed in its name by the president and treasurer thereof, in such amount and with such sureties as the comptroller shall approve, conditioned for the faithful performance of its duties as such agent. Any such society, club or exposition receiving such sum of two thousand dollars as herein provided shall not receive any portion of the moneys collected from racing associations or moneys already appropriated for the benefit of county agricultural societies.

§ 2. This act shall take effect immediately.

CHAPTER 598.

AN ACT relating to the State Veterinary College at Cornell University.

Became a law May 10, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. For the purpose of constructing and equipping suitable buildings for the State Veterinary College at Cornell University, at Ithaca, New York, the sum of one hundred thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of funds not otherwise appropriated, to be paid by the treasurer, upon the warrant of the comptroller, upon vouchers approved by the commissioner of agriculture, to the Cornell University. No part of such moneys shall be expended until plans and specifications for the construction and equipment of such buildings and the location thereof shall have been approved by the commissioner of agriculture, nor until the comptroller shall have certified that, in his judgment, the expenses of the completion and equipment of such buildings, in accordance with such plans and specifications, will not exceed the amount of such appropriation. Such buildings and equipment shall be the property of the state.

§ 2. This act shall take effect immediately.

CHAPTER 807.

AN ACT making appropriations for the support of government.

Became a law May 28, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The several amounts named in this act are hereby appropriated and authorized to be paid from the several funds indicated, to the respective public officers, and for the several purposes specified, for the fiscal year beginning on the first day of October, in the year eighteen hundred and ninety-five, namely:

FROM THE GENERAL FUND.

* * * * * * * *

For the promotion of agriculture in this State, sixty thousand dollars; twenty thousand dollars thereof shall be distributed in premiums by the New York State Agricultural Society, the remaining forty thousand dollars shall be distributed by the commissioner of agriculture among the American Institute of the city of New York, agricultural societies, fairs, clubs and expositions according to the provisions of the agricultural law, being chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, as amended.

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CHAPTER 814.

AN ACT to provide for the erection of a building for the exhibition and preservation of fruit, and for the erection of houses for the accommodation of members of the staff, at the agricultural experiment station at Geneva, Ontario county, and making an appropriation therefor.

Became a law May 29, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Eight thousand five hundred dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the hands of the treasurer, not otherwise appropriated, to be paid to the New York State Agricultural Experiment Station at Geneva, Ontario county; one thousand dollars of the said sum to be used for the purpose of erecting a suitable building for the exhibition and preservation of fruit products, and seven thousand five hundred dollars thereof to be used for the purpose of erecting three houses for the use of the members of the official staff of the said experiment station. Such moneys shall be paid by the treasurer, upon the warrant of the comptroller, upon vouchers approved by the commissioner of agriculture.

§ 2. This act shall take effect immediately.

CHAPTER 820.

AN ACT to amend the agricultural law relative to the distribution of funds collected from associations incorporated for the purpose of improving the breed of horses, and making an appropriation in accordance therewith.

Became a law May 29, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-eight of the agricultural law, as amended by chapter two hundred and forty-one of the laws of eighteen hundred and ninety-four, is hereby amended to read as follows:

(*Amended by section* 1 *of chapter* 221 *of the Laws of* 1896, *section* 1 *of chapter* 589 *of the Laws of* 1897, *and chapter* 494 *of the Laws of* 1898.)

§ 88. **Receipts and apportionment of moneys for the promotion of agriculture.** Money appropriated for the promotion of agriculture in this state, the distribution of which is not otherwise provided for by law shall be apportioned and distributed by the commissioner of agriculture among the various county agricultural societies and the American Institute in the City of New

York as follows: One-half thereof shall be apportioned and distributed equally and the remainder in proportion to the actual premiums paid during the previous year by such societies and institute, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. All revenues collected by the state comptroller and yet undistributed from the tax collected from racing associations, pursuant to chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, shall constitute a fund which shall be disbursed on behalf of the state for prizes for improving the breed of cattle, sheep and horses at the various fairs throughout the state, as hereinafter prescribed. Twenty-five per centum of the funds so collected shall be disbursed by the commissioner of agriculture among the agricultural societies, clubs or expositions of the state, which have not, previous to the passage of this act, received appropriations from the state as follows: One-third shall be apportioned and distributed equally, and the remainder in proportion to annual premiums paid during the past year by such society. Such sum shall only be paid to societies which have held fairs annually during each of the three years next preceding the passage of this act, and which have paid at their annual meeting or fairs during such three years, not less than one thousand dollars in the aggregate as premiums for agriculture, mechanical and domestic products, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast, and which shall file a statement of the amounts actually paid as such premiums during the past year, duly verified by the president and treasurer, with the commissioner of agriculture and the comptroller on or before the first day of July, eighteen hundred and ninety-five. Seventy-five per centum of such funds shall be disbursed by the commissioner of agriculture among the various county agricultural societies throughout the state, and the American Institute, in the city of New York, as follows: One-half shall be apportioned and distributed equally, and the remainder in proportion to the actual premiums paid during the previous year by such societies and institute, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county, or it is not in active operation as such, the money which the county society of such county would be entitled to receive under this article, shall be apportioned among and paid to the several town or other agricultural societies in such county according to the amount of premiums paid, provided such town societies sustain a public fair, with premium-list, which premium-list and reports of such town fairs shall be forwarded and made to the commissioner of agriculture. All revenues, which shall be received by the comptroller, and not distributed as heretofore provided, and all moneys received by him from the tax collected from racing associations pursuant to chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, or hereafter otherwise collected from racing associations, corporations or clubs, shall constitute a fund which shall be annually disbursed on behalf of the state for prizes for improving the breed of cattle, sheep and horses at the various fairs throughout the state as hereinafter prescribed. Thirty per centum of the funds so collected shall be disbursed by the commissioner of agriculture among the agricultural societies, clubs or expositions of the state, which have not, previous to the passage of this act, received appropriations from the state, as follows: One-third shall be apportioned and distributed equally and the remainder in proportion to annual premiums paid during the previous year by such society. Such sums shall only be paid to societies which shall have held fairs annually during each of the three years next preceding the passage of this act, and which shall have paid at their annual meeting or fairs during such three years not less than one thousand dollars in the aggregate as premiums for agricultural, mechanical and domestic products, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast. Seventy per centum of such funds shall be disbursed by the commissioner of agriculture among the various county agricultural societies throughout the state, and the American Institute, in the city of New York, as follows: One-half shall be apportioned and distributed equally, and the remainder in proportion to the actual premiums paid during the previous years by such societies and institute, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in the county, or it is not in active operation as such, the money which the county society of such county would be entitled to receive under this act, shall be apportioned among and paid to the several town or other agricultural societies in such county according to the amount of premiums paid, provided such town societies sustain a public fair, with premium-lists, and reports of such town fairs shall be forwarded and made to the commissioner of agriculture. All societies other than county agricultural societies shall hereafter on or before the first day of December in each year, file a statement in duplicate, duly verified by the president and treasurer, showing the amount of premiums paid at the last annual fair, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast, one of which statements shall be filed in the office of the commissioner of agriculture and the other in the office of the comptroller, and no such society shall be hereafter entitled to receive such appropriations in any year in which the actual amount paid by it as such premiums is less than five hundred dollars.

§ 2. The sum of ninety-five thousand nine hundred and eighty dollars and fifty-four cents, being the sum collected from racing associations in pursuance of chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven, as amended by chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, is hereby appropriated out of any moneys in the treasury not otherwise appropriated, to be distributed in the manner provided by section eighty-eight of the agricultural law, as amended by this act, and in the proportion provided by this act for the distribution of moneys already collected and yet undistributed, as hereinbefore recited. Such moneys shall be payable by the treasurer on the warrant of the comptroller on the order of the commissioner of agriculture.

§ 3. This act shall take effect immediately.

CHAPTER 821.

AN ACT to amend the executive law, relating to the duties and powers of the attorney-general.

Became a law May 29, 1895, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Subdivisons one and two of section fifty-two of the executive law, is hereby amended to read as follows:

1. Prosecute and defend all actions and proceedings in which the State is interested, and have charge and control of all the legal business of the departments and bureaus of the State, or of any office thereof which requires the services of attorney or counsel, in order to protect the interests of the State, but this section shall not apply to any of the military department bureaus or military offices of the State.

2. Whenever required by the governor, attend in person, or by one of his deputies, a court of oyer and terminer or appear before the grand jury thereof for the purpose of managing and conducting in such court or before such jury such criminal actions or proceedings as shall be specified in such requirement; in which case the attorney-general or his deputy so attending shall exercise all the powers and perform all the duties in respect of such actions or proceedings, which the district attorney would otherwise be authorized or required to exercise or perform; and in any of such actions or proceedings the district attorney shall only exercise such powers and perform such duties as are required of him by the attorney-general or the deputy attorney-general so attending.

§ 2. Section 55 of said executive law is hereby amended to read as follows:

§ 55. **Additional counsel.** The governor, or attorney-general may designate and employ such additional attorneys or counsel as may be necessary to assist in the transaction of any of the legal business mentioned in section fifty-two of this act and such attorneys or counsel shall be paid from the treasury a reasonable fee upon the certificate of the governor and attorney-general, the amount thereof to be audited and allowed by them or may be paid by the attorney-general out of the costs recovered by him.

§ 3. This act shall take effect immediately.

LAWS OF 1896.

CHAPTER 221.

AN ACT to amend chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," and the acts amendatory thereof, relative to the apportionment of moneys appropriated for the promotion of agriculture.

Became a law April 8, 1896, with the approval of the Governor, Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-eight of article five of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, as amended by chapter two hundred and forty-one of the laws of eighteen hundred and ninety-four, as amended by chapter eight hundred and twenty of the laws of eighteen hundred and ninety-five, known as the agricultural law, constituting articles one, two, three, four and five of chapter thirty-three of the general laws, is hereby amended to read as follows:

(*Amended by section* 1 *of chapter* 589 *of the Laws of* 1897, *and chapter* 494 *of the Laws of* 1898.)

§ 88. Receipts and apportionment of moneys for the promotion of agriculture. Of all moneys appropriated for the promotion of agriculture in any one year, twenty thousand dollars thereof shall be distributed in premiums by the New York State Agricultural society; two thousand dollars thereof shall be paid to each of the agricultural societies, clubs or exhibitions which shall have held annual fairs or meetings during each of the three years next preceding such appropriation, and which shall have

paid at each of such annual fairs or meetings during such three years the sum of three thousand dollars as premiums for agricultural interests, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast, under the conditions and in the manner provided by section eighty-nine of this chapter. Seventy per centum of the balance of the amount so appropriated shall be apportioned and distributed among the various county agricultural societies and the American Institute in the city of New York; and thirty per centum thereof among the various town and other agricultural societies, clubs or exhibitions, entitled by this section to receive thirty per centum of the moneys received by the comptroller from the tax collected from the racing associations, corporations or clubs of the State. Such apportionment and distribution shall be made by the commissioner of agriculture in the following manner. One-half of the seventy per centum to be apportioned to such county agricultural societies and the American Institute in the city of New York shall be apportioned and distributed equally and the remainder in proportion to the actual premiums paid during the previous year by such societies and institute, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county or if it is not in active operation as such, then the town society or societies in such county, or other agricultural societies in such county that would otherwise be entitled to share under the thirty per centum distribution referred to in this section, shall share jointly in the distribution of such money on the same basis as they would if they were a county fair, provided such town societies sustain a public fair, with premium list, which premium list and reports of such town fairs shall be forwarded and made to the commissioner of agriculture.' Of the thirty per centum to be distributed among the various town and other agricultural societies, clubs or exhibitions, one-third thereof shall be apportioned and distributed equally and the remainder in proportion to the premiums awarded and paid by said society, club or exposition for exhibits made at the annual fair upon the awards or premiums of which they seek a portion of the money to be distributed, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. No proportion of such amount shall be paid to any such society, club or exhibition in which the actual amount paid by it as such premiums in the year preceding such apportionment, is less than five hundred dollars. All revenues which have been or shall be received by the comptroller, and not distributed as heretofore provided, and all moneys received by him from the tax collected from racing associations pursuant to chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, and chapter five hundred and seventy of the laws of eighteen hundred and ninety-five, and all acts amendatory thereto, or hereafter otherwise collected from racing associations, corporations or clubs, shall constitute a fund which shall be annually disbursed on behalf of the state for prizes for improving the breed of cattle, sheep and horses at the various fairs throughout the state as hereinafter prescribed. Thirty per centum of the funds so collected shall be disbursed by the commissioner of agriculture among the agricultural societies, clubs or exhibitions of the state, which had not previous to May twenty-ninth, eighteen hundred and ninety-five, received appropriations from the state, as follows: One-third shall be apportioned and distributed equally and the remainder in proportion to the premiums awarded and paid by said society, club or exposition for exhibits made at the annual fair upon the awards or premiums of which they seek a portion of the money to be distributed. Such sums shall only be paid to societies now organized and in active operation in counties having a population according to the census of eighteen hundred and ninety-two of over three hundred and twenty-five thousand inhabitants, or which shall have held fairs, annually, during each of the three years prior to May twenty-ninth, eighteen hundred and ninety-five, and which shall have paid, at their annual meeting or fairs during such three years, not less than one thousand dollars in the aggregate as premiums for agricultural, mechanical and domestic products, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast. Seventy per centum of such funds shall be disbursed by the commissioner of agriculture among the various county agricultural societies throughout the state, and the American Institute, in the city of New York, as follows: One-half shall be apportioned and distributed equally, and the remainder in proportion to the premiums awarded and paid by said society, club or exposition, for exhibits made at the annual fair upon the awards or premiums of which they seek a portion of the money to be distributed, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county or it is not in active operation as such, then the town society or societies in such county or other agricultural societies in such county that would otherwise be entitled to share under the thirty per centum distribution referred to in this section, shall share jointly in the distribution of such money on the same basis as they would if they were a county fair, provided such town societies sustain a public fair, with premium lists and reports of such town fairs shall be forwarded and made to the commissioner of agriculture. All such societies shall hereafter, on or before the fifteenth day of December in each year, file a statement duly verified by the secretary and treasurer, showing the amount of premiums paid at the last annual fair, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast, which statement shall be filed in the office of the commissioner of agriculture. No such society, other than a county society, shall be hereafter entitled to receive such appropriations in any year in which the actual amount paid by it as such premium is less than five hundred dollars. Any town or other agricultural society in a county in which there is no agricultural society and which, according to the terms of this section receives any portion of the seventy per centum of such funds apportioned to county agricultural societies, shall not receive the portion of the thirty per centum of such funds which they would be otherwise entitled to receive. Any society, club or exposition, except the New York State Agricultural society, receiving the sum of two thousand dollars under the provisions of section eighty-nine of this act, shall not receive any other portion of the money appropriated for the promotion of agriculture.

§ 2. The sum of twenty-seven thousand two hundred and thirteen dollars and fifty-five cents, being the sum collected from racing associations in pursuance of chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven, as amended by chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, and chapter five hundred and seventy of the laws of eighteen hundred and ninety-five, is hereby appropriated out of any moneys in the treasury, not otherwise appropriated, to be distributed in the manner provided by section eighty-eight of the agricultural law, as hereby amended, and in the proportion provided by this act for the distribution of moneys collected as hereinbefore recited. Such money shall be payable by the treasurer on the warrant of the comptroller on the order of the commissioner of agriculture.

§ 3. This act shall take effect immediately.

CHAPTER 948.

AN ACT making appropriations for the support of government.

Became a law May 28, 1896, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The several amounts named in this act are hereby appropriated and authorized to be paid from the several funds indicated to the respective public officers, and for the several purposes specified, for the fiscal year beginning on the first day of October, in the year eighteen hundred and ninety-six, namely:

FROM THE GENERAL FUND.

* * * * * * * * *

For the promotion of agriculture in this state, seventy-six thousand dollars; twenty thousand dollars thereof shall be distributed in premiums by the New York State Agricultural society;

of the remaining fifty-six thousand dollars there shall be distributed by the commissioner of agriculture among the American institute of the city of New York, town, county and other agricultural societies, fairs, clubs and expositions, the amount they are entitled thereto by virtue of the provisions of section eighty-nine of the agricultural law; seventy per centum of the said remainder shall be apportioned among the county agricultural societies, fairs or associations, the American institute of the city of New York or to the societies, fairs or associations, entitled thereto in counties where there are no such county agricultural societies, and thirty per centum thereof shall be apportioned to the various town and other agricultural societies, clubs or exhibitions, to be distributed in the manner provided by section eighty-eight of the agricultural law.

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LAWS OF 1897.

CHAPTER 128.

AN ACT making an appropriation for the promotion of agriculture by the college of agriculture of Cornell university.

Became a law March 25, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. For the promotion of agricultural knowledge throughout the state, the sum of twenty-five thousand dollars, or so much thereof as may be necesssary, is hereby appropriated out of any money in the treasury not otherwise appropriated to be paid to the college of agriculture at Cornell university to be expended in giving instruction throughout the state by means of schools, lectures and other university extension methods, or otherwise, and in conducting investigations and experiments; in discovering the diseases of plants and remedies; in ascertaining the best method of fertilization of fields, gardens and plantations; and best modes of tillage and farm management and improvement of live stock; and in printing leaflets and disseminating agricultural knowledge by means of lectures or otherwise; and in preparing and printing for free distribution the results of such investigations and experiments; and for republishing such bulletins as may be useful in the furtherance of the work; and such other information as may be deemed desirable and profitable in promoting the agricultural interests of the state. Such college of agriculture may, with the consent and approval of the commissioner of agriculture, employ teachers and experts and necessary clerical help to assist in carrying out the purposes of this bill. Such teachers, experts and clerical help may be removed by the college of agriculture in its discretion; and may be paid for their services such sum or sums as

may be deemed reasonable and proper and as shall be approved by the commissioner of agriculture. All of such work by such teachers and experts who shall be employed under this bill shall be under the general supervision and direction of the commissioner of agriculture. The sum appropriated by this act shall be paid by the treasurer of the state upon the warrant of the comptroller to the treasurer of the Cornell university, upon such treasurer filing with the comptroller a bond in such sum and with such sureties as the comptroller may approve, conditioned for the faithful application of such sum to the purposes for which the same is hereby appropriated. Such sum shall be payable by the treasurer of Cornell university upon vouchers approved by the officers or agents of such university having charge of such college of agriculture, and such vouchers shall be filed by the treasurer of Cornell university in the office of the comptroller of the state.

§ 2. This act shall take effect immediately.

CHAPTER 306.

AN ACT making appropriations for the support of government.

Became a law April 19, 1897, with the approval of the Governor. Passed by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The several amounts named in this act are hereby appropriated and authorized to be paid from the several funds indicated, to the respective public officers, and for the several purposes specified, for the fiscal year beginning on the first day of October, in the year eighteen hundred and ninety-seven namely:

FROM THE GENERAL FUND.

* * * * * * * * *

For the promotion of agriculture in this state, seventy-six thousand dollars; twenty thousand dollars thereof shall be distributed in premiums by the New York state agricultural society; of the remaining fifty-six thousand dollars there shall be distributed by the commissioners of agriculture among the American institute of the city of New York, town, county and other agricultural societies, fairs, clubs and expositions the amount they are entitled thereto by virtue of the provisions of section eighty-nine of the agricultural law; seventy per centum of the said remainder shall be apportioned among the county agricultural societies, fairs or associations, the American institute of the city of New York or to the societies, fairs or associations entitled thereto in counties where there are no such county agricultural societies, and thirty per centum thereof shall be apportioned to the various town and other agricultural societies, clubs or exhibitions, to be distributed in the manner provided by section eighty-eight of the agricultural law.

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CHAPTER 500.

AN ACT to amend the agricultural law, relative to the promotion of sugar beet culture by scientific and practical experiment, and making an appropriation therefor.

Became a law May 18, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," is hereby amended by inserting after article four, a new article to be known as article five, and to read as follows:

ARTICLE V.

SUGAR BEET CULTURE.

Section 71. Commissioner of agriculture to apportion moneys appropriated for promotion of sugar beet culture.
72. Persons, et cetera, to whom moneys may be apportioned.
73. Statements; inspections, branding of packages.
74. Inspectors, to be appointed by commissioner.
75. Weighman, powers and duties.
76. Apportionment of moneys by commissioners of agriculture.

Section 71. **Commissioners of agriculture to apportion moneys appropriated for promotion of sugar beet culture.** Money appropriated for the promotion of sugar beet culture by scientific and practical experiment shall be apportioned by the commissioners of agriculture to the persons, firms, associations or corporations entitled thereto, according to the provisions of this article.

§ 72. **Persons, et cetera, to whom moneys may be distributed.** Any person, firm, association or corporation, engaged in the manufacture of sugar from beets grown in the state of New York, upon registration in the office of the commissioner of agriculture, and filing a certificate therein, stating the name of such person, firm, association or corporation, the location of the factory, and the capacity thereof, and the time when the manufacture of sugar began or is to begin, shall be entitled to a distributive share of the amount appropriated for the promotion and encouragement of sugar beet culture, as provided in this article. No such person, firm, association or corporation shall receive any portion of the moneys so appropriated, unless all the beets used in the manufacture of such sugar are grown within the state of New York, and unless the grower received therefor a net sum of not less than five dollars per ton, and provided such beets are not grown by the manufacturer of such sugar. No money shall be distributed to such manufacturers, unless the sugar manufactured by them shall contain at least ninety per centum of crystallized sugar. The commissioner of agriculture may expend such sum or sums as he may deem necessary or expedient, not exceeding ten per centum of the amount appropriated for the purposes of this article, in practical and scientific experiments in growing sugar beets in one or more sections of this state, for the purpose of determining the adaptability of the soil thereof for the production of sugar beets.

§ 73. **Statements; inspections, branding of packages.** The quantity and quality of sugar upon which said money is to be paid shall be determined by the commissioner of agriculture of this state, with whom all claimants shall, from time to time, file verified statements showing the quantity and quality of sugar manufactured by them, the price paid the producer for beets and upon which said money is claimed. The said commissioner shall, without unnecessary delay, visit or cause to be visited by such persons as he shall designate in writing, the factory where said sugar has been produced or manufactured, and take such evidence by the sworn testimony of the officers or employes of such factory or others, as to the amount and quality of sugar so manufactured, and the price paid for beets as to him or the person so designated by him shall appear satisfactory and conclusive. The sugar so manufactured shall be placed by the manufacturer in original packages, which shall be examined and branded by the said commissioner or person by him designated, with a suitable brand, showing the quantity and the quality of sugar contained in each of said packages, of which an accurate account shall be kept by said inspector, and filed in the office of the commissioner of agriculture of this state.

§ 74. **Inspectors, to be appointed by commissioners.** It shall be the duty of the commissioner of agriculture to appoint a resident inspector in each town or city where one or more manufactories of sugar may be located in this state, the aggregate output of which factories shall exceed two thousand pounds of sugar per day, and such examiner shall make such examinations, take such evidence and make such records and reports as is specified in section two of this act. The compensation or fee for such service of said inspector shall not exceed the sum of twenty-five cents for each package so branded, nor the sum of five dollars per day for any one day's service, and such resident inspector shall be required to give a good and sufficient bond in the sum of not less than two thousand dollars to the state of New York, contingent on the faithful performance of his duties, said bond to be approved by the said commissioner of agriculture. Said fees or compensation, together with the cost of said brand and any and all analysis that the said commissioner of agriculture or other authorized inspector shall require to be made, shall be borne and paid by the claimant of said money.

§ 75. **Weighman, powers and duties.** It shall be the duty of the commissioner of agriculture to appoint at each sugar manufactory in this state where the output of such manufactory shall exceed two thousand pounds of sugar per day, a person who shall weigh all beets received by the person or persons, corporation or association operating said manufactory. Such person shall be known as the weighman, and he shall keep accurate record of all duties performed by him. He shall discharge all duties pertaining to his position in an impartial manner, and shall furnish the commissioner of agriculture with a good and sufficient bond in the sum of two thousand dollars for the faithful discharge of his duties as prescribed by this act. The commissioner of agriculture may appoint such person or persons to assist said weighman as the service to be performed may require. Each person so appointed shall give bond as provided by this section. The weighman shall take into his possession, promptly on receipt of beets at such manufactory, such samples of beets as he deems fair and equitable, from which to remove dirt or other dockage. He shall then promptly weigh all beets from which samples have been taken and keep an accurate record of all weights, and all of such records shall show the names of both the seller and the buyer. The weights furnished by said weighman shall be accepted by both the seller and the buyer, and upon such weights so furnished settlement between the seller and the buyer shall be made. The compensation or fee allowed such weighman shall not exceed the sum of five dollars per day for time actually employed and for his assistants a sum not to exceed three dollars per day for the time actually employed. All expenses arising from the duties of said weighman or his assistants, as prescribed by this act, shall be paid by the person or persons, corporation or association operating such manufactory where such expense is incurred.

§ 76. **Distribution of moneys by commissioner of agriculture.** On or before the first day of February in each year, the commissioner of agriculture shall prepare a detailed statement of the quantity of sugar manufactured by each person, firm or association or corporation entitled to receive a portion of the moneys appropriated for the promotion and encouragement of sugar beet culture. He shall apportion to each such person, firm, association or corporation the moneys so appropriated according to the amount of sugar of the grade described in this article manufactured by each of them, during the preceding year. Not more than one cent a pound shall be paid in any one year on account of the sugar so manufactured. Such commissioner of agriculture shall certify to the comptroller the amount apportioned to each manufacturer of sugar according to the provisions of this article; and the comptroller shall draw his warrant upon the state treasurer for the amount so certified, payable to the party or parties to whom such apportionment was made.

§ 2. Articles five and six of said act are hereby made articles six and seven.

§ 3. The sum of twenty-five thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury not otherwise appropriated, to be paid in the manner prescribed in this act for the purpose of making effectual the provisions thereof.

§ 4. This act shall take effect immediately.

CHAPTER 554.

AN ACT to amend chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," and the penal code, relative to violations of the agricultural law.

Became a law May 18, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section thirty-seven of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," is hereby amended so as to read as follows:

(*Amended by chapter* 558 *of the Laws of* 1898.)

§ 37. Every person violating any of the provisions of this article shall forfeit to the people of the state of New York the sum of not exceeding one hundred dollars for every such violation. When such violation consists of the manufacture or production of any prohibited article, each day during which or any part of which such manufacture or production is carried on or continued, shall be deemed a separate violation of the provisions of this article. When the violation consists of the sale, or the offering or exposing for sale or exchange of any prohibited article or substance, the sale of each one of several packages shall constitute a separate violation, and each day on which any such article or substance is offered or exposed for sale or exchange, shall constitute a separate violation of this article. When the use of any such article or substance is prohibited, each day during which or any part of which said article or substance is so used or furnished for use, shall constitute a separate violation, and the furnishing of the same for use to each person to whom the same may be furnished shall constitute a separate violation. Whoever by himself or another violates any of the provisions of article two of said chapter, shall be guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than twenty-five dollars, nor more than two hundred dollars, or by imprisonment of not less than one month nor more than six months or by both such fine and imprisonment, for the first offense; and by six months imprisonment for the second offense; and any person who violates any of the provisions of article three of said chapter, is guilty of a misdemeanor, and shall be punished by a fine of not less than fifty dollars, nor more than one hundred dollars; and in addition thereto shall forfeit to the people of the state of New York, the sum of one hundred dollars for every such violation.

§ 2. Section four hundred and eight-a of the penal code is hereby amended so as to read as follows:

§ 408a. **Violations of the agricultural law.** Any person who disregards, disobeys or violates any proclamation, notice, order or regulation, lawfully issued or prescribed by the commissioner of agriculture, for the suppression or prevention of the spread of infectious or contagious diseases among domestic animals, or who violates any of the provisions of sections eighty and eighty-two of article five of the agricultural law, is guilty of a misdemeanor.

§ 3. This act shall take effect immediately.

CHAPTER 589.

AN ACT to amend chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," as amended by chapter two hundred and twenty-one of the laws of eighteen hundred and ninety-six, relative to the apportionment of moneys appropriated for the promotion of agriculture.

Became a law May 19, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-eight of article five of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, as amended by chapter two hundred and twenty-one of the laws of eighteen hundred and ninety-six, is hereby amended to read as follows:

(*Amended by section* 1 *of chapter* 494 *of the Laws of* 1898.)

§ 88. **Receipts and apportionment of moneys for the promotion of agriculture.** Of all moneys appropriated for the promotion of agriculture in any one year, twenty thousand dollars thereof shall be distributed in premiums by the New York State Agricultural Society; two thousand dollars thereof shall be paid to each of the agricultural societies, agricultural clubs, or agricultural expositions which shall have held annual agricultural fairs or meetings during each of the three years next preceding such appropriation, and which shall have paid at each of such annual fairs or meetings during such three years the sum of three thousand dollars as premiums for agricultural interests, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast, under the conditions and in the manner provided by section eighty-nine of this chapter. Seventy per centum of the balance of the amount so appropriated shall be apportioned and distributed among the various county agricultural societies and the American Institute in the city of New York; and thirty per centum thereof among the various towns and other agricultural societies, agricultural clubs or agricultural expositions entitled by this section to receive thirty per centum of the moneys received by the comptroller from the tax collected from the racing associations, corporations or clubs of the state. Such apportionment and distribution shall be made by the commissioner of agriculture in the following manner. One-half of the seventy per centum to be apportioned to such county agricultural societies and the American Institute in the city of New York shall be apportioned and distributed equally and the remainder in proportion to the actual premiums paid during the previous year by such societies and institute, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county, or if the county agricultural society is not in active operation as such, then the town society or societies in such county, or other agricultural societies in such county, except the New York State Agricultural Society, that would otherwise be entitled to share under the thirty per centum distribution referred to in this section, shall share jointly in the distribution of such money on the same basis as they would if they were a county agricultural society, provided such societies sustain a public fair with premium list, which premium list and reports of such societies shall be forwarded and made to the commissioner of agriculture. Of the thirty per centum to be distributed among the various town and other agricultural societies, clubs or expositions one-third thereof shall be apportioned and distributed equally and the remainder in proportion to the premiums awarded and paid by said society, club or exposition for exhibits made at the annual fair upon the awards or premiums of which they seek a portion of the money to be distributed, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. No proportion of such amount shall be paid to any such society, club or exposition in which the actual amount paid by it as such premiums in the year preceding such apportionment, is less than five hundred dollars. All revenues which have been or shall be received by the comptroller, and not distributed as heretofore provided, and all moneys received by him from the tax collected from racing associations pursuant to chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, and chapter five hundred and seventy of the laws of eighteen hundred and ninety-five, and all acts amendatory thereto, or hereafter otherwise collected from racing associations, corporations or clubs, shall constitute a fund, which shall be annually disbursed on behalf of the state for prizes for improving the breed of cattle, sheep and horses at the various fairs throughout the state as hereinafter prescribed. Thirty per centum of the funds so collected shall be disbursed by the commissioner of agriculture among the agricultural societies, agricultural clubs or agricultural expositions of the state, which had not previous to May twenty-ninth, eighteen hundred and ninety-five, received appropriations from the state, as follows: One-third shall be apportioned and distributed equally and the remainder in proportion to the premiums awarded and paid by said society, club or exposition for exhibits made at the annual fairs upon the awards or premiums of which they seek a portion of the money to be distributed, such sums shall only be paid to such societies which have received appropriations from the state previous to the passage of this act, and are now duly organized under the laws of the state of New York, and in active operation in counties having a population according to the census of eighteen hundred and ninety-two of over three hundred and twenty-five thousand inhabitants, or which shall have held fairs, annually, during each of the three years prior to May twenty-ninth, eighteen hundred and ninety-five, and which shall have paid, at their annual meetings or fairs during such three years, not less than one thousand dollars in the aggregate as premiums for agriculture, mechanical and domestic products, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast, and which shall have filed their report with the commissioner of agriculture, on or before July first, eighteen hundred and ninety-five, as heretofore provided in chapter eight hundred and twenty of the laws of eighteen hundred and ninety-five. Seventy per centum of such funds shall be disbursed by the commissioner of agriculture among the various county agricultural societies throughout the state, and the American Institute, in the city of New York, as follows: One-half shall be apportioned and distributed equally, and the remainder in proportion to the premiums awarded and paid by said society, club or exposition, for exhibits made at the annual fair upon the awards or premiums of which they seek a portion of the money to be distributed, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county, or if the county agricultural society is not in active operation as such, then the town society or societies in such county, or other agricultural societies in such county, except the New York State Agricultural Society, that would otherwise be entitled to share under the thirty per centum distribution referred to in this section, shall share jointly in the distribution of such money on the same basis as they would if they were a county agricultural society, provided such societies sustain a public fair, with premium list and reports of such societies shall be forwarded and made to the commissioner of agriculture. All agricultural societies, agricultural clubs or agricultural expositions entitled to receive any portion of the moneys appropriated by the state must hereafter, on or before the fifteenth day of December, in each year, file a statement, duly verified by the secretary and treasurer, showing the amount of premiums paid at the last annual fair, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast, which statement shall be filed in the office of the commissioner of agriculture, otherwise such society, club or exposition shall forfeit its right to participate in the distribution of such moneys for premiums paid for such year. No proportion of such moneys shall be paid to any such society, club or exposition in which the actual amount paid by it as such premiums in the year preceding such apportionment, is less than five hundred dollars. Any town or other agricultural society in a county in which there is no county agricultural society in active operation and which, according to the terms of this section receives any portion of the seventy per centum of such funds apportioned to county agricultural societies, shall not receive any portion of the thirty per centum of such funds. Any such society, club or exposition, receiving the sum of two thousand dollars under the provisions of section eighty-nine of this act, shall not receive any other portion of the money appropriated for the promotion of agriculture. Any such agricultural society, agricultural club, agricultural exposition, or agricultural fair association, organized under the laws of the State of New York, which shall fail or neglect to hold annual fairs and file their annual reports as provided by this law, with the commissioner of agriculture for two consecutive years, shall forfeit all of their chartered rights, including any privileges or moneys they might thereafter otherwise be entitled to under this act.

§ 2. The sum of fifty thousand dollars of the amount collected and due from racing associations in pursuance of chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven as amended by chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, and chapter five hundred and seventy of the laws of eighteen hundred and ninety-five and all acts amendatory thereof or supplementary thereto is hereby appropriated out of any moneys in the treasury so collected at the time of the distribution thereof as provided herein. Such sum shall be distributed in the manner provided by section eighty-eight of the agricultural law, as amended, and in the proportion provided therein for the distribution of such moneys, and shall be payable by the treasurer on the warrant of the comptroller on the order of the commissioner of agriculture.

§ 3. All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

§ 4. This act shall take effect immediately.

CHAPTER 767.

AN ACT providing for horticultural investigations, experiments, instruction and information, and for the dissemination of horticultural knowledge in the second judicial department, at the agricultural station at Geneva, in the county of Ontario, and making an appropriation therefor.

Became a law May 22, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The sum of eight thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury not otherwise appropriated, for the purpose of conducting horticultural investigations, experiments, instruction and information, and to disseminate horticultural knowledge in the second judicial department, to be paid to the New York state agricultural experiment station at Geneva, county of Ontario, as provided for in and pursuant to section eighty-five of the agricultural law. Such money hereby appropriated shall be paid by the treasurer on the warrant of the comptroller, upon vouchers approved by the commissioner of agriculture.

§ 2. This act shall take effect immediately.

CHAPTER 768.

AN ACT to amend chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws."

Became a law May 22, 1897, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section twenty-six of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," is hereby amended so as to read as follows:

§ 26. **Manufacture and sale of imitation butter prohibited.** No person by himself, his agents or employes, shall produce or manufacture out of or from any animal fats or animal or vegetable oils not produced from unadulterated milk or cream from the same, the article known as oleomargarine or any article or product in imitation or semblance of natural butter produced from pure, unadulterated milk or cream of the same; or mix, compound with or add to milk, cream or butter any acids or other deleterious substance or any animal fats or animal or vegetable oils not produced from milk or cream, so as to produce any article or substance or any human food in imitation or in semblance of natural butter, nor sell, keep for sale or offer for sale any article, substance, or compound made, manufactured or produced in violation of the provisions of this section, whether such article, substance or compound shall be made or produced in this state or elsewhere. Any dealer in any article or product, the manufacture or sale of which is prohibited by this act, who shall keep, store or display such article or product, with other merchandise or stock in his place of business, shall be deemed to have the same in his possession for sale.

§ 2. This act shall take effect immediately.

CHAPTER 790.

AN ACT making appropriations for certain expenses of government and supplying deficiencies in former appropriations.

Became a law May 24, 1897, with the approval of the Governor. Passed by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The treasurer shall pay on the warrant of the comptroller, from the several funds specified, to the persons and for the objects indicated in this act, the amounts named or such parts of those amounts as shall be sufficient to accomplish, in full, the purposes designated by the appropriations, but no warrants shall be issued, except in cases of salaries, until the amounts claimed shall have been audited and allowed by the comptroller, who is hereby authorized to determine the same. The persons demanding payment shall present to him a detailed statement, in items, verified by affidavit; and if the account shall be for services it must show when, where and under what authority they were rendered; if for expenditures, when, where and under what authority they were made; if for articles furnished, when and where they were furnished, to whom they were delivered, and under what authority; and if the demand be for traveling expenses, the account must also specify the distance traveled, the place of starting and destination, the duty or business and the date and items of expenditure. On all accounts for transportation, furniture, blank and other books furnished for the use of officers, binding, blanks, printing, stationery and postage, a bill duly certified must be furnished; but whenever an appropriation shall have been provided otherwise, the sum herein directed to be paid shall not be considered as an addition to such other appropriation unless it shall be expressly so declared in this act.

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For the promotion of agriculture, the sum of ten thousand dollars, to be distributed by the commissioner of agriculture as provided in section eighty-eight of the agricultural law.

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LAWS OF 1898.

CHAPTER 110.

AN ACT to amend subdivision three of section thirty-two hundred and twenty-eight of the code of civil procedure, relating to the recovery of costs on judgments under fifty dollars.

Became a law March 21, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Subdivision three of section thirty-two hundred and twenty-eight of the code of civil procedure is hereby amended so as to read as follows:

3. An action specified in subdivision first, third, fourth or fifth of section twenty-eight hundred and sixty-three of this act. But if, in an action to recover damages for an assault, battery, false imprisonment, libel, slander, criminal conversation, seduction, or malicious prosecution; or a fine or penalty in which the people of the state are a party, the plaintiff recovers less than fifty dollars damages, the amount of his cost can not exceed the damages.

§ 2. This act shall take effect September first, eighteen hundred and ninety-eight.

CHAPTER 113.

AN ACT to amend the agricultural law, to prevent fraud in the sale of paris green.

Became a law March 23, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four, and five of chapter thirty-three of the general laws," is hereby amended by adding a new article to be known as article eight and to read as follows:

ARTICLE VIII.

Section 110. State manufacturer and the dealer in original packages to file certificate with commissioner of agriculture.
111. Certificate to be given by commissioner of agriculture to state manufacturer and dealer in original packages.
112. Composition of paris green.
113. Paris green to be analyzed at experiment station.
114. Penalty for violations.

Section 110. **State manufacturer and the dealer in original packages to file certificate with commissioner of agriculture.** After the passage of this act it shall be the duty of each and every manufacturer of paris green within this state, and of every dealer in original packages of paris green manufactured outside of this state, before the said paris green is offered or exposed for sale or sold within this state, to submit to the commissioner of agriculture a written or printed statement setting forth: first, the brands of paris green to be sold, the number of pounds contained in each package in which it is put upon the market for sale, the name or names of the manufacturers and the place of manufacturing the same; second, the statement shall set forth the amount of arsenic which the said paris green contains, and the statement so furnished shall be considered as constituting a guarantee to the purchaser that every package of such paris green contains not less than the amount of arsenic set forth in the statement.

§ 111. **Certificate to be given by the commissioner of agriculture to state manufacturer and dealer in original packages.** Every purchaser of paris green in original packages, which is manufactured outside of this state, who intends to sell or expose the same for sale, and every manufacturer of paris green within this state shall, after filing the statement above provided for, with the commissioner of agriculture, receive from the said commissioner of agriculture, a certificate stating that he has complied with the foregoing statement, which certificate shall be furnished without any charge therefor; said certificate when furnished shall authorize the party receiving the same to deal in this state in paris green. Any person who fails to file the statement aforesaid shall not be entitled to such certificate and shall not be entitled to deal in paris green within this state; nothing in this section shall be construed as applying to retail dealers.

§ 112. **Composition of paris green or analogous product.** Paris green, or any product analogous to it, when sold, offered or exposed for sale, as such, in this state, shall contain at least fifty per centum of arsenious oxide.

§ 113. **Paris green to be analyzed at experiment station.** The director of the New York state agricultural experiment station, at Geneva, shall, under the direction of the commissioner of agriculture, examine, or cause to be examined, the different brands of paris green sold, offered or exposed for sale, within the state, and cause samples of the same to be analyzed, and shall report the result of the analysis forthwith to the commissioner of agriculture.

§ 114. **Penalties for violations.** Any person or persons, firm, association, company or corporation violating any of the provisions of this act, shall be guilty of a misdemeanor, and shall be fined not less than fifty dollars nor more than two hundred dollars;

and in addition thereto shall forfeit and pay unto the people of the state of New York the sum of one hundred dollars, together with the costs of the suit in an action caused to be brought by the commissioner of agriculture in the name of the people of the state of New York, as provided by section eight of the agricultural law.

§ 2. This act shall take effect immediately.

CHAPTER 153.

AN ACT to amend the agricultural law, in relation to receptacles for butter.

Became a law March 29, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section thirty-two of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," is hereby amended so as read as follows:

§ 32. No person, firm, association or corporation buying or receiving milk, not produced from the dairy of such person, firm, association or corporation, for the purpose of selling the same for consumption as such, or for manufacturing the same into butter, cheese, condensed milk or other human food, shall keep the same in utensils, cans, vessels, room or rooms, building or buildings, that are unclean or that have unsanitary surroundings or drainage, or in any condition whatsoever that would tend to produce or promote conditions favorable to unhealthfulness or disease. The commissioner of agriculture shall notify all persons, firms, associations or corporations violating this section, to clean said utensils, cans, vessels, room or rooms, building or buildings, or to so improve the sanitary conditions that the law will not be violated, and if such notice is complied with in ten days time, Sundays excepted, then no action shall lie for a violation of this section. The provisions of this act shall not apply to cities of the first class.

§ 2. This act shall take effect immediately.

CHAPTER 191.

AN ACT making an appropriation to continue the promotion of sugar beet culture, in accordance with the provisions of chapter five hundred of the laws of eighteen hundred and ninety-seven.

Became a law March 31, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The sum of fifty thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury not otherwise appropriated, to be paid in the manner prescribed by chapter five hundred of the laws of eighteen hundred and ninety-seven. Of such amount the commissioner of agriculture may expend such sum or sums as he may deem necessary or expedient, not exceeding twenty-five hundred dollars, in practical and scientific experiments in growing sugar beets in one or more sections of this state and for the purpose of determining the adaptability of the soil for the productions of such beets. This appropriation is made by the legislature in continuation of the policy adopted at the session of eighteen hundred and ninety-seven, in the faith and with the declared purpose of making direct appropriations from the state for a successive period of not less than five years from said first appropriation, in aid of the permanent establishment of the beet sugar industry in New York.

§ 2. This act shall take effect immediately.

CHAPTER 194.

AN ACT to amend chapter three hundred thirty-eight, laws of eighteen hundred ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," relative to maple sugar and syrup.

Became a law March 31, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section ninety-one of chapter three hundred thirty-eight, laws of eighteen hundred ninety-three, is hereby amended so as to read as follows:

§ 91. (1) No person shall manufacture for sale, keep for sale, or offer or expose for sale, any sugar in imitation or semblance of maple sugar which is not pure maple sugar, nor any syrup in imitation or semblance of maple syrup, which is not pure maple syrup, nor shall any person manufacture, offer or expose for sale any sugar as and for maple sugar which is not pure maple sugar, nor any syrup as and for maple syrup which is not pure maple syrup.

(2) For the purpose of this act the term "maple sugar" shall be deemed to mean sugar made from pure maple sap or pure maple syrup, and the term "maple syrup" shall be deemed to mean syrup made from pure maple sap.

§ 2. The following section is hereby added to chapter three hundred thirty-eight, laws of eighteen hundred ninety-three, and shall be known as section ninety-two.

§ 92. No person shall manufacture, sell or expose for sale, any compound or mixture as and for sugar which shall be made up of maple sugar mixed with any other sugar or any other substance without branding or labeling the said sugar with a statement giving the ingredients of which it is made up. No person shall manufacture, sell, expose for sale, or offer for sale any compound or mixture as syrup which shall be made up of maple syrup mixed with any other syrup or ingredient without branding or labeling said syrup with a statement giving the ingredients of which it is made up. This shall not be construed to apply to a syrup or syrups manufactured and sold for medicinal purposes only.

§ 3. This act shall take effect immediately.

CHAPTER 412.

AN ACT to prevent the adulteration of and deception in the sale of linseed or flaxseed oil.

Became a law April 22, 1898, with the approval of the Governor. Passed, a majority being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. No person, firm or corporation shall manufacture or mix for sale, sell, or offer for sale, under the name of raw linseed oil, any article which is not wholly the product of commercially pure linseed or flaxseed. Nor shall any person, firm or corporation manufacture or mix for sale, sell, or offer for sale, under the name of boiled linseed oil, any article, unless the oil from which said article is made be wholly the product of commercially pure linseed or flaxseed, and unless the same has been heated to at least two hundred and twenty-five degrees Fahrenheit.

2. Nothing in this act shall be construed as prohibiting the sale or manufacture of any compound of linseed or flaxseed oil; provided, that such compound, if it imitates in appearance and is designed to take the place of linseed or flaxseed oil, shall not be manufactured or mixed for sale, sold or offered for sale, under a name or description containing the words "linseed oil" or "flaxseed oil."

3. Any person, firm or corporation who shall violate any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished, for each and every such violation, with a fine of not less than fifty dollars nor more than five hundred dollars; and in default of the payment of such fine shall be committed to the county jail for a period of not less than thirty days.

4. It shall be the duty of the commissioner of agriculture to enforce the provisions of this act. The said commissioner and his assistants, experts and chemists, and other appointed by him, shall have access, ingress and egress to and from all places of business and buildings where linseed or flaxseed oil is kept for sale or stored. They shall also have the power and authority to open any tank, barrel, can or other vessel containing such oil, and may inspect the contents thereof, and take samples therefrom for analysis.

5. Any person, firm or corporation who shall violate any of the provisions of this act shall, in addition to the fines herein previously described, for each offense forfeit and pay a fixed penalty of one hundred dollars. Such penalty shall be recovered, with costs, in any court of the state having jurisdiction thereof, in an action to be prosecuted in the name of the people, by the commissioner of agriculture, or any of his assistants, and shall be devoted to the payment of the expenses of the department of said commissioner. In any action commenced in the supreme court for the recovery of such penalties, an application may be made on the part of the plaintiff to said court or any justice thereof for an injunction to restrain the defendant, his agents, servants and employes, from the further violation of this act during the pendency of the action, and it shall be the duty of such court or justice to grant the injunction, in the same manner as injunctions are usually granted under the rules and practice of such court, upon proof by affidavits that the defendant has been guilty of such violation, either before or after the commencement of the action. In case the plaintiff shall recover judgment for the penalty or penalties demanded in the complaint, the judgment

shall contain a permanent injunction, restraining the defendant, his agents, servants and employes, from any further violation of the section or sections on which the recovery is obtained.

6. This act shall take effect immediately.

CHAPTER 428.

AN ACT making an appropriation of moneys collected and due from racing associations for the promotion of agriculture.

Became a law April 22, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The sum of fifty-five thousand dollars of the amount collected and due from racing associations in pursuance of chapter four hundred and seventy-nine of the laws of eighteen hundred and eighty-seven, as amended by chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, and chapter five hundred and seventy of the laws of eighteen hundred and ninety-five, and all acts amendatory thereof or supplementary thereto is hereby appropriated out of any moneys in the treasury so collected at the time of the distribution thereof as provided herein. Such sum shall be distributed in the manner provided by section eighty-eight of the agricultural law, as amended, and in the proportion provided therein for the distribution of such moneys, and shall be payable by the treasurer on the warrant of the comptroller on the order of the commissioner of agriculture.

§ 2. This act shall take effect immediately.

CHAPTER 482.

AN ACT to amend section eighty-two, section eighty-three as amended by chapter one hundred thirty-four of the laws of eighteen hundred ninety-five, and to repeal section eighty-four of chapter three hundred and thirty-eight of the laws of eighteen hundred ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four, five, six and seven of chapter thirty-three of the general laws," relative to the prevention of disease in fruit trees and the pests that infect the same.

Became a law April 22, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-two of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three is hereby amended so as to read as follows:

§ 82. **The prevention of disease in fruit trees and the extirpation of insect pests that infect the same.** No person shall knowingly or willfully keep any peach, almond, apricot, or nectarine tree affected with the contagious disease known as yellows. Nor shall any person knowingly or willfully keep any plum, cherry or other trees infected with the contagious disease or fungus, known as black knot, nor any tree, shrub or plant infested with or by the San Jose scale or other insect pest dangerously injurious to or destructive of the trees, shrub or other plant. Every such tree, shrub and plant shall be a public nuisance, and no damage shall be awarded for entering upon premises and destroying such trees if infected with yellows or infested with San Jose scale or for cutting away the diseased part of any tree affected with black knot or altogether destroying such tree if necessary to suppress such disease, if done in accordance with the provisions of this article, except as otherwise herein provided. Every person when he becomes aware of the existence of such disease or insect pest in any tree owned by him shall forthwith report the same to the commissioner of agriculture at Albany, New York, requesting said commissioner to take such action as the law provides.

§ 2. Section eighty-three of said chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, as amended by chapter one hundred and thirty-four of the laws of eighteen hundred and ninety-five, are hereby amended so as to read as follows:

§ 83. **Appointment and duties of the agent of the commissioner of agriculture.** When the commissioner of agriculture knows or has reason to believe that any such contagious disease exists, or that there is good reason to believe that it exists, or danger is justly apprehended of its introduction in any town or city in the state, or that any injurious insect pest exists within this state, and has reason to believe that danger may be justly apprehended from its existence, he shall forthwith send some competent person and such agent or agents as he may deem necessary to assist in extirpating said pest or pests, disease or diseases, and the said commissioner of agriculture is hereby authorized and empowered to take such steps and do whatever may be deemed necessary to so control or prevent the spread or extirpate said pest or pests, disease or diseases, and he shall, unless previously inspected by a federal officer the same year, cause an examination to be made at least once each year prior to September first of each and every nursery or other place where trees, shrubs or plants, commonly known as nursery stock, are grown for sale for the purpose of ascertaining whether the trees, shrubs or plants therein kept or propagated for sale are infected with any such contagious disease or diseases, or infested with such pest or pests. If after such examination it is found that the said trees, shrubs or other plants so examined are free in all respects from any such contagious or infectious disease, or diseases, dangerously injurious, pest or pests, the said commissioner, or his duly authorized agent or other person designated to make such examination shall thereupon issue to the owner or proprietor of the said stock thus examined a certificate setting forth the fact of the examination and that the stock so examined is apparently free from any and all such disease or diseases, pest or pests. Should any nurseryman, agent, dealer or broker send out or deliver within the state, trees, vines, shrubs, plants, buds or cuttings, commonly known as nursery stock, and which are subject to the attacks of the insects and diseases above provided for, unless he has in his possession a copy of said certificate; dated within a year thereof; deface or destroy said certificate; or wrongfully be in possession of said certificate, he shall be guilty of a misdemeanor. All nursery stock shipped by freight, express or other transportation companies, shall be accompanied by a copy of said certificate attached to each car, box, bale or package. Any person shipping nursery stock as above, without such certificate attached shall be guilty of a misdemeanor. A certificate issued by an official of the United States, setting forth the fact that the nursery stock is free from any and all such disease or diseases, pest or pests, shall be accepted in lieu of state inspection. If in the judgment of the said commissioner of agriculture or the person or persons representing him, the trees, shrubs or other plants should be entirely destroyed, then such destruction shall be carried on and completed under the supervision of the commissioner of agriculture, or the person or persons duly appointed by him, without unnecessary delay, but the owner of the trees shall be notified immediately, upon its being determined that they must be destroyed, by a written notice signed by such commissioner, or the person representing him and left at his usual place of residence, or if not a resident of the town by leaving the notice with the person in charge of the premises, trees or fruit or in whose possession they may be. Such notice shall contain a brief statement of the facts found to exist, whereby it is deemed necessary to destroy said trees, shrubs or other plants, and shall call attention to the law under which it is proposed to destroy them. In case of objection to the findings of the inspector or agent of the commissioner of agriculture, an appeal shall be made to said commissioner, whose decision shall be final; an appeal must be taken within three days from service of said notice, and shall act as a stay of proceedings until it is heard and decided. When the commissioner of agriculture or the person or persons appointed by him shall be determine that any tree or trees, shrubs or other plants must be treated or destroyed, forthwith he may employ all necessary assistants for that purpose, and such person or persons, agent or agents, employee or employees may enter any or all premises in any town or city necessary for the purpose of such treatment, removal or destruction.

§ 3. Section eighty-four of said chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three is hereby repealed.

§ 4. The provisions of this act shall not apply to florists' green house plants, flowers and cuttings, commonly known as greenhouse stock.

§ 5. This act shall take effect June first, eighteen hundred and ninety-eight.

CHAPTER 491.

AN ACT to amend chapter three hundred and thirty-eight, laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five, of chapter thirty-three of the general laws," in relation to sale and transportation of calves.

Became a law April 22, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter three hundred and thirty-eight, laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four, five, six and seven of chapter thirty-three of the general laws," is hereby amended by adding the following sections, to be known as section seventy-one, seventy-two and seventy-three.

§ 71. No person shall slaughter, for the purpose of selling the same for food, or expose for sale or sell within this state, or bring or cause to be brought into any city, town or village within this state for food any calf or carcass of the same, or any part thereof except the hide, unless it is in good, healthy condition and was at least four weeks of age at the time of killing. Any person or persons duly authorized by the commissioner of agriculture, may examine any calf or veal found within this state offered or exposed for sale, or kept with intent to sell as food, and if such calf is under four weeks of age, or the veal is from a calf killed under four weeks of age, or from a calf in an unhealthy condition when so killed, he may seize the same and cause it to be destroyed or disposed of in such manner as to make it impossible to be thereafter used as food.

§ 72. On and after the passage of this act it shall be unlawful for any corporation, partnership, person or persons to ship to or from any part of this state any carcass or carcasses of a calf or calves or any part of such carcass except the hide, unless they shall attach to every carcass or part thereof so shipped in a conspicuous place a tag, that shall stay thereon during such transportation, stating the name or names of the person or persons who raised the calf, the name of the shipper, the points of shipping and the destination and the age of the calf.

§ 73. On and after the passage of this act, no railroad company, express company, steamboat company, or other common carrier, shall carry or receive for transportation any carcass or carcasses of calves, or any part of the same except the hide, unless the said carcass or carcasses or parts thereof shall be tagged as herein provided.

§ 2. This act shall take effect immediately.

CHAPTER 494.

AN ACT to amend chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five, of chapter thirty-three of the general laws," relative to distribution of moneys to agricultural societies.

Became a law April 22, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section eighty-eight of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, as amended by chapter five hundred and eighty-nine, of the laws of eighteen hundred and ninety-seven, is hereby amended so as to read as follows:

§ 88. **Receipts and apportionment of moneys for the promotion of agriculture.** Of all moneys appropriated for the promotion of agriculture in any one year, twenty thousand dollars thereof shall be distributed in premiums by the New York State Agricultural Society; two thousand dollars thereof shall be paid to each of the agricultural societies, agricultural clubs, or agricultural expositions which shall have held annual agricultural fairs or meetings during each of the three years next preceding such appropriation, and which shall have paid at each of such annual fairs or meetings during such three years the sum of three thousand dollars as premiums for agricultural interests, exclusive of the premiums paid for trials or tests of speed, skill or endurance by man or beast, under the conditions and in the manner provided by section eighty-nine of this chapter. Seventy per centum of the balance of the amount so appropriated shall be apportioned and distributed among the various county agricultural societies and the American Institute in The City of New York; and thirty per centum thereof among the various towns and other agricultural societies, agricultural clubs or agricultural expositions entitled by this section to receive thirty per centum of the moneys received by the comptroller from the tax collected from the racing associations, corporations or clubs of the state. Such apportionment and distribution shall be made by the commissioner of agriculture in the following manner: One-half of the seventy per centum to be apportioned to such county agricultural societies and the American Institute in The City of New York shall be apportioned and distributed equally and the remainder in proportion to the actual premiums paid during the previous year by such societies and institute, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county, or if the county agricultural society is not in active operation as such, then the town society or societies in such county, or other agricultural societies in such county, except the New York State Agricultural Society, that would otherwise be entitled to share under the thirty per centum distribution referred to in this section, shall share jointly in the distribution of such money on the same basis as they would if they were a county agricultural society, provided such societies sustain a public fair with premium list, which premium list and reports of such societies shall be forwarded and made to the commissioner of agriculture. Of the thirty per centum to be distributed among the various town and other agricultural societies, clubs or expositions one-third thereof shall be apportioned and distributed equally and the remainder in proportion to the premiums awarded and paid by said society, club or exposition for exhibits made at the annual fair upon the awards or premiums of which they seek a portion of the money to be distributed, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. No proportion of such amount shall be paid to any such society, club or exposition in which the actual amount paid by it as such premiums in the year preceding such apportionment, is less than five hundred dollars. All revenues which have been or shall be received by the comptroller, and not distributed as heretofore provided, and all moneys received by him from the tax collected from racing associations pursuant to chapter one hundred and ninety-seven of the laws of eighteen hundred and ninety-four, and chapter five hundred and seventy of the laws of eighteen hundred and ninety-five, and all acts amendatory thereto, or hereafter otherwise collected from racing associations, corporations or clubs, shall constitute a fund, which shall be annually disbursed on behalf of the state for prizes for improving the breed of cattle, sheep and horses at the various fairs throughout the state as hereinafter prescribed. Thirty per centum of the funds so collected shall be disbursed by the commissioner of agriculture among the agricultural societies, agricultural clubs or agricultural expositions of the state, which had not, previous to May twenty-ninth, eighteen hundred and ninety-five, received appropriations from the state, other than appropriations that they received from the fund to be distributed to county societies from the fact that there was no county society in existence or in active operation within that county, as follows: One-third shall be apportioned and distributed equally and the remainder in proportion to the premiums awarded and paid by said society, club or exposition for exhibits made at the annual fairs upon the awards or premiums of which they seek a portion of the money to be distributed, such sums shall only be paid to such societies which have received appropriations from the state previous to the passage of this act, and are now duly organized under the laws of the state of New York, and in active operation in counties having a population according to the census of eighteen hundred and ninety-two of over three hundred and twenty-five thousand inhabitants, or which shall have held fairs, annually, during each of the three years prior to May twenty-ninth, eighteen hundred and ninety-five, and which shall have paid, at their annual meetings or fairs during such three years, not less that one thousand dollars in the aggregate as premiums for agriculture, mechanical, and domestic products, exclusive of the premiums paid for trials or tests of speed, skill or endurance of man or beast, and which shall have filed their report with the commissioner of agriculture, on or before July first, eighteen hundred and ninety-five, as heretofore provided in chapter eight hundred and twenty of the laws of eighteen hundred and ninety-five. Seventy per centum of such funds shall be disbursed by the commissioner of agriculture among the various county agricultural societies throughout the state, and the American Institute, in The City of New York, as follows: One-half shall be apportioned and distributed equally, and the remainder in proportion to the premiums awarded and paid by said society, club or exposition, for exhibits made at the annual fair upon the awards or premiums of which they seek a portion of the money to be distributed, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast. If there is no county agricultural society in any county, or if the county agricultural society is not in active operation as such, then the town society or societies in such county, or other agricultural societies in such county, except the New York State Agricultural Society, that would otherwise be entitled to share under the thirty per centum distribution referred to in this section, shall share jointly in the distribution of such money on the same basis as they would if they were a county agricultural society, provided such societies sustain a public fair, with premium list and reports of such societies shall be forwarded and made to the commissioner of agriculture. All agricultural societies, agricultural clubs or agricultural expositions entitled to receive any portion of the moneys appropriated by the state must hereafter, on or before the fifteenth day of December in each year, file a statement, duly verified by the secretary and treasurer, showing the amount of premiums paid at the last annual fair, exclusive of premiums paid for trials or tests of speed, skill or endurance of man or beast, which statement shall be filed in the office of the commissioner of agriculture, otherwise such society, club or exposition shall forfeit its right to participate in the distribution of such moneys for premiums paid for such year. No proportion of such moneys shall be paid to any such society, club or exposition in which the actual amount paid by it as such premiums in the year preceding such apportionment, is less than five hundred dollars. Any town or other agricultural society in a county in which there is no county agricultural society in active operation and which, according to the terms of this section receives any portion of the seventy per centum of such funds apportioned to county agricultural societies, shall not receive any portion of the thirty per centum of such funds. Any such society, club or exposition, receiving the sum of two thousand dollars under the provisions of section eighty-nine of this act, shall not receive any other portion of the money appropriated for the promotion of agriculture. Any such agricultural society, agricultural club, agricultural exposition, or agricultural fair association, organized under the laws of the state of New York, which shall fail or neglect to hold annual fairs and file their annual reports as provided by this law, with the commissioner of agriculture for two consecutive years, shall forfeit all of their chartered rights, including any privileges or moneys they might thereafter otherwise be entitled to under this act.

§ 2. This act shall take effect immediately.

CHAPTER 557.

AN ACT to amend the agricultural law, relative to the inspection of dairy products.

Became a law April 26, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section twelve of article one of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," and known as the agricultural law, is hereby amended to read as follows:

§ 12. **Inspection, how conducted.** When the commissioner of agriculture, an assistant commissioner, or any person or officer authorized by the commissioner, or by this chapter, to examine or inspect any product manufactured or offered for sale shall in discharge of his duties take samples of such product, he shall before taking a sample, request the person delivering the milk or who has charge of it at the time of inspection, to thoroughly stir or mix the said milk before the sample is taken. If the person so in charge refuses to stir or mix the milk as requested, then the person so requesting shall himself so stir and mix the milk before taking the sample, and the defendant shall thereafter be precluded from introducing evidence to show that the milk so taken was not a fair sample of the milk delivered, sold, offered or exposed for sale by him. The person taking the sample of milk for analysis shall take duplicate samples thereof in the presence of at least one witness, and he shall in the presence of such witness seal both of such samples, and shall tender, and, if accepted, deliver at the time of taking one sample to the manufacturer or vendor of such product, or to the person having custody of the same, with a statement in writing of the cause of the taking of the sample. In taking samples of milk for analysis at a creamery, factory, platform or other place where the same is delivered by the producer for manufacture, sale or shipment, or from a milk vendor who produces the milk which he sells, with a view of prosecuting the producer of such milk for delivering, selling or offering for sale adulterated milk, the said commissioner of agriculture or assistant, or his agent or agents, shall within ten days thereafter, with the consent of the said producer, take a sample in a like manner of the mixed milk of the herd of cows from which the milk first sampled was drawn and shall deliver the duplicate sample to the said producer and shall cause the sample taken by himself or his agent to be analyzed. If the sample of milk last taken by the commissioner of agriculture or his agent or agents shall upon analysis prove to contain no higher percentage of milk solids, or no higher percentage of fat than as the sample taken at the creamery, factory, platform or other place, then no action shall lie against the said producer for violation of subdivisions one, two, three, seven and eight of section twenty of the agricultural law. In taking a second sample as above set forth from the mixed milk of the herd, it shall be the duty of the commissioner of agriculture to have an assistant, agent or agents present during the entire time in which the said cattle are being milked to observe closely so as to be sure that the milk thus to be sampled is not adulterated and to see that it is thoroughly mixed so that the sample taken shall be a fair sample of the average quality of the mixed milk of the entire dairy or herd of cows of said producer. If, however, the said producer refuses to allow such examination of the milk produced by his dairy then he shall be precluded from offering any evidence whatever tending to show that the milk delivered by him at the said creamery, factory, platform or other place was just as it came from the cow. If the said producer does permit such examination the commissioner of agriculture shall, upon receiving application therefor, send to said producer a copy of the analysis of each of the samples of milk so taken and analyzed as above provided.

§ 2. This act shall take effect immediately.

CHAPTER 558.

AN ACT to amend the agricultural law, in relation to penalties.

Became a law April 26, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section thirty-seven of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," as amended by chapter five hundred and fifty-four of the laws of eighteen hundred and ninety-seven, is hereby amended to read as follows:

§ 37. **Penalties.** Every person violating any of the provisions of article two and three shall forfeit to the people of the state of New York a sum not less than twenty-five dollars nor more than one hundred dollars for every such violation. When such violation consists of the manufacture or production of any prohibited article, each day during which or any part of which such manufacture or production is carried on or continued, shall be deemed a separate violation of the provisions of this article.

When the violation consists of the sale, or the offering or exposing for sale or exchange of any prohibited article or substance, the sale of each one of several packages shall constitute a separate violation, and each day on which any such article or substance is offered or exposed for sale or exchange, shall constitute a separate violation of this article. When the use of any such article or substance is prohibited, each day during which or any part of which said article or substance is so used or furnished for use, shall constitute a separate violation, and the furnishing of the same for use to each person to whom the same may be furnished shall constitute a separate violation. Whoever by himself or another violates any of the provisions of articles two and three of said chapter, shall be guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than twenty-five dollars, nor more than two hundred dollars, or by imprisonment of not less than one month nor more than six months or by both such fine and imprisonment, for the first offense; and by six months' imprisonment for the second offense.

§ 2. This act shall take effect immediately.

CHAPTER 559.

AN ACT to amend chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled "An act in relation to agriculture, constituting articles one, two, three, four and five of chapter thirty-three of the general laws," relative to branding cheese.

Became a law April 26, 1898, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section thirty-three of chapter three hundred thirty-eight, of the laws of eighteen hundred ninety-three, is hereby amended so as to read as follows:

§ 33. **Manufacturer's brand of cheese.** Every manufacturer of full-milk cheese may put a brand upon each cheese indicating "full-milk cheese," and the date of the month and year when made; and no person shall use such a brand upon any cheese made from milk from which any of the cream has been taken. The commissioner of agriculture shall procure and issue to the cheese manufacturers of the state, on proper application therefor, and under such regulations as to the custody and use thereof as he may prescribe, a uniform stencil brand, bearing a suitable device or motto, and the words, "New York state full-cream cheese." Every such brand shall be used upon the outside of the cheese and shall bear a different number for each separate factory. The commissioner shall keep a book, in which shall be registered the name, location and number of each manufactory using the brand, and the name or names of the persons at each manufactory authorized to use the same. No such brand shall be used upon any other than full-cream cheese or packages containing the same.

§ 2. This act shall take effect immediately.

CHAPTER 593.

AN ACT making appropriations for the support of the government.

Became a law April 27, 1898, with the approval of the Governor. Passed by a two-thirds vote.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The several amounts named in this act are hereby appropriated and authorized to be paid from the several funds indicated, to the respective public officers, and for the several purposes specified, for the fiscal year beginning on the first day of October, in the year eighteen hundred and ninety-eight, namely:

FROM THE GENERAL FUND.

* * * * * * * * * * * *

For the promotion of agriculture in this state, eighty-six thousand dollars; twenty thousand dollars thereof shall be distributed in premiums by the New York state agricultural society; of the remaining sixty-six thousand dollars there shall be distributed by the commissioners of agriculture among the American Institute of the city of New York, town, county and other agricultural societies, fairs, clubs and expositions the amount they are entitled thereto by virtue of the provisions of section eighty-nine of the agricultural law; seventy per centum of the said remainder shall be apportioned among the county agricultural societies, fairs or associations, the American Institute of the city of New York or to the societies, fairs or associations entitled thereto in counties where there are no such county agricultural societies, and thirty per centum thereof shall be apportioned to the various towns and other agricultural societies, clubs or exhibitions, to be distributed in the manner provided by section eighty-eight of the agricultural law.

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